

Contents of Volume 245

American Journal of Physiology

American Journal of Physiology:
Cell Physiology

American Journal of Physiology:
Endocrinology and Metabolism

American Journal of Physiology:
Gastrointestinal and Liver Physiology

American Journal of Physiology:
Heart and Circulatory Physiology

American Journal of Physiology:
Regulatory, Integrative and Comparative Physiology

American Journal of Physiology:
Renal, Fluid and Electrolyte Physiology

L

3

11

American Journal of Physiology: Cell Physiology

No. 1. JULY 1983

BRIEF REVIEW

Calcium-induced release of calcium from the cardiac sarcoplasmic reticulum <i>A. Fabiato</i>	C1
<hr/>	
Fatigue and phosphocreatine depletion during carbon dioxide-induced acidosis in rat muscle <i>K. Sahlin, L. Edström, and H. Sjöholm</i>	C15
Origin of the decline in pancreatic amylase secretion with time in vitro <i>J. J. L. Ho and S. S. Rothman</i>	C21
Actin filaments and vasopressin-stimulated water flow in toad urinary bladder <i>M. Pearl and A. Taylor</i>	C28
Energy metabolism of preimplantation mammalian blastocysts <i>D. J. Benos and R. S. Balaban</i>	C40
Exogenous substrate utilization by isolated myocytes from chronically diabetic rats <i>V. Chen, G. J. Bagby, and J. J. Spitzer</i>	C46
Role of particle interaction on distribution of liver lysosomes in colloidal silica <i>C. A. Surmacz, J. J. Wert, Jr., and G. E. Mortimore</i>	C52
Metabolic alterations and distributions of rat liver lysosomes in colloidal silica <i>C. A. Surmacz, J. J. Wert, Jr., and G. E. Mortimore</i>	C61
Effects of ATP on lysosomes: protection against hyperosmolar KCl <i>R. C. Ruth and W. B. Weglicki</i>	C68
Ammonia selectively stimulates neutral amino acid transport across blood-brain barrier <i>A. M. Mans, J. F. Biebuyck, and R. A. Hawkins</i>	C74
Evidence for active Na ⁺ transport by cultured monolayers of pulmonary alveolar epithelial cells <i>B. E. Goodman, R. S. Fleischer, and E. D. Crandall</i>	C78
β -Adrenergic catecholamine-dependent properties of rat myometrium primary cultures <i>M. Fortier, D. Chase, S. G. Korenman, and J. F. Krall</i>	C84
Effects of diabetes on cardiac lysosomes and protein degradation <i>B. H. L. Chua, W. M. Long, N. Lautensack, J. A. Lins, and H. E. Morgan</i>	C91
Effects of amino acid methyl esters on cardiac lysosomes and protein degradation <i>W. M. Long, B. H. L. Chua, N. Lautensack, and H. E. Morgan</i>	C101
Role of membrane fusion in CO ₂ stimulation of proton secretion by turtle bladder <i>D. L. Stetson and P. R. Steinmetz</i>	C113
Increased phosphate efflux from acinar cell during protein secretion <i>T. Melese and S. S. Rothman</i>	C121
K ⁺ -stimulated sugar uptake in skeletal muscle: role of cytoplasmic Ca ²⁺ <i>P. Valant and D. Erlij</i>	C125
Insulin effects on protein synthesis are independent of glucose and energy metabolism <i>K. E. Flaim, P. J. Kochel, Y. Kira, K. Kobayashi, E. T. Fossel, L. S. Jefferson, and H. E. Morgan</i>	C133
Complex regulation of fibronectin synthesis by cells in culture <i>D. R. Senger, A. T. Destree, and R. O. Hynes</i>	C144

RAPID COMMUNICATIONS

Single K ⁺ -channel current measurements from brain synaptosomes in lipid bilayers <i>M. T. Nelson, M. Roudna, and E. Bamberg</i>	C151
---	------

A novel effect of amiloride on H ⁺ -dependent Na ⁺ transport <i>W. P. Dubinsky, Jr., and R. A. Frizzell</i>	C157
Volume-induced anion conductance in human B lymphocytes is cation independent <i>S. Grinstein, C. A. Clarke, A. Rothstein, and E. W. Gelfand</i>	C160

No. 2. SEPTEMBER 1983

ANNOUNCEMENT

Statistics Report #2	C165
----------------------	------

Apical sodium uptake in toad kidney epithelial cell line A6 <i>S. Sariban-Sohraby, M. B. Burg, and R. J. Turner</i>	C167
Development and activation of brown fat in rats with pheochromocytoma PC 12 tumors <i>D. Ricquier, G. Mory, M. Nechad, M. Combes-George, and J. Thibault</i>	C172
Influence of organic acids on intracellular pH <i>A. de Hemptinne, R. Marrannes, and B. Vanheel</i>	C178
Demonstration of an electrogenic Na ⁺ -K ⁺ pump in mouse spleen macrophages <i>E. K. Gallin and D. R. Livengood</i>	C184
Cholinergic potentiation of isoproterenol-induced cAMP level in sweat gland <i>K. Sato and F. Sato</i>	C189
FMLP-induced enzyme release from neutrophils: a role for intracellular calcium <i>D. Chandler, G. Meusel, E. Schumaker, and C. Stapleton</i>	C196
Ca ²⁺ regulation of tight-junction permeability and structure in <i>Necturus</i> gallbladder <i>C. E. Palant, M. E. Duffey, B. K. Mookerjee, S. Ho, and C. J. Bentzel</i>	C203
Observations of ²³ Na in frog skin by NMR <i>M. M. Civan, H. Degani, Y. Margalit, and M. Shporer</i>	C213
Uptake of latex particles by macrophages: characterization using flow cytometry <i>R. J. Parod and J. D. Brain</i>	C220
Uptake of latex particles by pulmonary macrophages: role of calcium <i>R. J. Parod and J. D. Brain</i>	C227
Bumetanide inhibits (Na + K + 2Cl) co-transport at a chloride site <i>M. Haas and T. J. McManus</i>	C235
Sarcolemmal Na ⁺ -K ⁺ -ATPase activity in diabetic rat heart <i>G. N. Pierce and N. S. Dhalla</i>	C241
Intracellular potassium activities in canine tracheal epithelium <i>M. J. Welsh</i>	C248
Ca ²⁺ , cAMP, and changes in myosin phosphorylation during contraction of smooth muscle <i>M. O. Aksoy, S. Mras, K. E. Kamm, and R. A. Murphy</i>	C255
Ca ²⁺ , myosin phosphorylation, and relaxation of arterial smooth muscle <i>W. T. Gerthoffer and R. A. Murphy</i>	C271

RAPID COMMUNICATIONS

Vasoconstrictor-evoked prostaglandin synthesis in cultured vascular smooth muscle <i>A. Hassid and C. Williams</i>	C278
Effects of insulin and tunicamycin on neuronal insulin receptors in culture <i>F. T. Boyd, Jr., and M. K. Raizada</i>	C283

No. 3. NOVEMBER 1983

BRIEF REVIEWS

Alteration of luminal membrane structure by antidiuretic hormone <i>R. M. Hays</i>	C289
Cytoplasmic involvement in ADH-mediated osmosis across toad urinary bladder <i>D. R. DiBona</i>	C297

Stereospecific glucose transport across motor nerve terminal membrane: an electrophysiological study <i>Y. Shimoni and R. Rahamimoff</i>	C308
Calcium elevation in cultured heart cells: its role in cell injury <i>E. Murphy, J. F. Aiton, C. R. Horres, and M. Lieberman</i>	C316
β -Adrenergic blockade of prostaglandin E_2 - and D_2 -induced erythroid colony formation <i>M. Belegu, B. Beckman, and J. W. Fisher</i>	C322
Direct anabolic effects of thyroid hormone on isolated mouse heart <i>J. S. Crie, J. R. Wakeland, B. A. Mayhew, and K. Wildenthal</i>	C328
Correlation between water flow and intramembrane particle aggregates in toad epidermis <i>D. Brown, A. Grosso, and R. C. DeSousa</i>	C334
Glucose-induced retention of intracellular ^{45}Ca in pancreatic islets <i>T. Andersson</i>	C343
Passive transport of K^+ and Na^+ in human red blood cells: sulfhydryl binding agents and furosemide <i>L. A. Wiater and P. B. Dunham</i>	C348
Intracellularly recorded electrical activity of smooth muscle of guinea pig oviduct <i>H. C. Parkington</i>	C357
Vasopressin stimulates growth of renal epithelial cells in culture <i>M. M. Walsh-Reitz and F. G. Toback</i>	C365
Forskolin stimulation of acid and pepsinogen secretion in isolated gastric glands <i>C. S. Chew</i>	C371
Tetrodotoxin-sensitive Na^+ channels in isolated single cultured rat myocardial cells <i>N. Matsuki and K. Hermesmeyer</i>	C381
Effects of "loop" diuretics on ion transport by dog tracheal epithelium <i>J. H. Widdicombe, I. T. Nathanson, and E. Highland</i>	C388
Uptake of liposomal phosphatidylcholine by granular pneumocytes in primary culture <i>A. Chander, W. D. Claypool, Jr., J. F. Strauss III, and A. B. Fisher</i>	C397
Tension and ATPase rate in steady-state contractions of rabbit soleus fiber segments <i>B. H. Krasner and M. J. Kushmerick</i>	C405
Ca^{2+} -dependent slow action potentials in normal and dystrophic mouse skeletal muscle <i>L. M. Kerr and N. Sperelakis</i>	C415
Energy transport from mitochondria to myofibril by a creatine phosphate shuttle in cardiac cells <i>G. McClellan, A. Weisberg, and S. Winegrad</i>	C423

SPECIAL COMMUNICATIONS

Regional cerebral glucose utilization measured with [^{14}C]glucose in brief experiments <i>D. M. Lu, D. W. Davis, A. M. Mans, and R. A. Hawkins</i>	C428
--	------

RAPID COMMUNICATIONS

Nitrogen-14 nuclear magnetic resonance spectroscopy of mammalian tissues <i>R. S. Balaban and M. A. Knepper</i>	C439
Thiol-dependent passive K^+ - Cl^- transport in sheep red blood cells. V. Dependence on metabolism <i>P. K. Lauf</i>	C445
NAD^+ -dependent ADP-ribosyltransferase in renal brush-border membranes <i>S. A. Kempson and N. P. Curthoys</i>	C449
Metabolic control in a state of decreased activation: modulation of red cell metabolism <i>R. Jevning, A. F. Wilson, H. Pirkle, J. P. O'Halloran, and R. N. Walsh</i>	C457

Subject Index to Volume 14	C463
Author Index to Volume 14	C469

CORRIGENDA

Volume 13, May 1983

Volume 244, May 1983

Page C369: A. Hassid. "Inhibition of prostaglandin biosynthesis in renal (MDCK) cells by cAMP." Page C369: in the abstract, the first sentence should read: Cultured renal tubular cells (MDCK) have many of the biological properties of cortical medullary tubular epithelial cells, including the ability to synthesize prostaglandin E₂ (PGE₂) as the major arachidonate metabolite. Page C373: Table 3 should read as follows:

TABLE 3. Effect of IBMX and vasopressin on intracellular and extracellular cAMP levels

	Intracellular cAMP	Extracellular cAMP
IBMX, μ M		
0 (control)	1.67 \pm 0.05 (4)	7.16 \pm 1.4 (4)
10	2.37 \pm 0.25 (4) $P < 0.05$	12.0 \pm 2.3 (4) $P > 0.1$
100	4.27 \pm 0.84 (4) $P < 0.025$	16.6 \pm 3.5 (4) $P < 0.05$
500	6.93 \pm 0.74 (4) $P < 0.001$	15.3 \pm 0.99 (3) $P < 0.01$
Vasopressin, μ M		
0.93	2.33 \pm 0.15 (3) $P < 0.02$	12.1 \pm 2.8 (3) $P > 0.10$

Values are means \pm SE; no. of separate expts indicated in parentheses. MDCK cells were incubated for 3 h; cAMP values are in pmol/10⁶ cells. Statistical comparisons were made relative to control values by unpaired two-tailed Student's *t* test. IBMX, 3-isobutyl-1-methylxanthine; cAMP, adenosine 3',5'-cyclic monophosphate.

American Journal of Physiology: Endocrinology and Metabolism

No. 1. JULY 1983

In vivo insulin sensitivity in the rat determined by euglycemic clamp <i>E. W. Kraegen, D. E. James, S. P. Bennett, and D. J. Chisholm</i>	E1
Fatty acid synthesis in adipose tissues of physically trained rats in vivo <i>K. Tokuyama and H. Okuda</i>	E8
Reciprocal changes in gluconeogenic enzyme activity in liver and kidney by VMH lesion <i>K. Nagai, S. Inoue, and H. Nakagawa</i>	E14
Fatty acid and glucose utilization in isolated, working fetal pig hearts <i>J. C. Werner, V. Whitman, R. R. Fripp, H. G. Schuler, J. Musselman, and R. L. Sham</i>	E19
Cardiovascular effects and clearance of arginine vasopressin in the fetal lamb <i>S. Wiryathian, J. C. Porter, R. P. Naden, and C. R. Rosenfeld</i>	E24
In vitro TSH and PRL secretion from eutopic and heterotopic rat pituitaries: effects of hypothyroidism <i>H. Ikeda and M. A. Greer</i>	E32
Impairment by aminooxyacetate of ionic response to nutrients in pancreatic islets <i>P. Lebrun, W. J. Malaisse, and A. Herchuelz</i>	E38
Three types of α -melanocyte-stimulating hormone: bioactivities and half-lives <i>D. Rudman, B. M. Hollins, M. H. Kutner, S. D. Moffitt, and M. J. Lynn</i>	E47
Effect of phenobarbital treatment on metabolism of vitamin D by rat liver <i>D. T. Baran</i>	E55
A triphasic pattern of parallel secretion of β -endorphin/ β -lipotropin and ACTH after adrenalectomy in rats <i>E. B. De Souza and G. R. Van Loon</i>	E60
Sympathetic nervous system and adrenal medullary responses to ischemic injury in mice <i>J. B. Young, S. Fish, and L. Landsberg</i>	E67
Effects of severe long-term food deprivation and refeeding on adipose tissue cells in the rat <i>W. H. Miller, Jr., I. M. Faust, A. C. Goldberger, and J. Hirsch</i>	E74
Pituitary nuclear triiodothyronine receptors during development in the rat <i>P. Coulombe, J. Ruel, R. Faure, and J. H. Dussault</i>	E81
Studies of origins of abnormal sympathetic function in obese Zucker rats <i>B. E. Levin, J. Triscari, and A. C. Sullivan</i>	E87
Metabolic effects of dichloroacetate in diabetic dogs <i>R. Park, P. R. Radosevich, W. J. Leach, P. Seto, and A. I. Arieff</i>	E94

RAPID COMMUNICATIONS

Dissociation of membrane potential and hormone secretion in bovine parathyroid cells <i>J. J. Morrissey and S. Klahr</i>	E102
---	------

No. 2. AUGUST 1983

Evidence of a defect in energy expenditure in 7-day-old Zucker rat (<i>fa/fa</i>) <i>E. Planche, M. Joliff, P. de Gasquet, and X. Lelievre</i>	E107
Effects of gastric inhibitory polypeptide on leucine- and arginine-stimulated insulin release <i>E. L. Mazzaferri, L. Ciofalo, L. A. Waters, G. H. Starich, J. C. Groshong, and L. DePalma</i>	E114
Insulin regulation of fat cell ribosomes, protein synthesis, and lipoprotein lipase <i>N. Vydellingum, R. L. Drake, J. Etienne, and A. H. Kissebah</i>	E121
Uterine and adipose lipoprotein lipase activity in hormone-treated and pregnant rats <i>J. M. Gray and M. R. C. Greenwood</i>	E132

Distribution of acute-phase α_2 -macroglobulin in rat fetomaternal compartments <i>D. E. Panrucker, P. C. W. Lai, and F. L. Lorscheider</i>	E138
Retention of calcium in intestinal wall of the rabbit by treatment with a glucocorticoid <i>H. Eiler and W. A. Lyke</i>	E143
Diminished sympathetic nervous system activity in genetically obese (<i>ob/ob</i>) mouse <i>J. B. Young and L. Landsberg</i>	E148
Hyperinsulinemia of obesity is due to decreased clearance of insulin <i>M. T. Meistas, S. Margolis, and A. A. Kowarski</i>	E155
Role of insulin in thermogenic responses to refeeding in 3-day-fasted rats <i>N. J. Rothwell, M. E. Saville, and M. J. Stock</i>	E160
Effects of β -blockade on glycogen metabolism in human subjects during exercise <i>D. Chasiotis, R. Brandt, R. C. Harris, and E. Hultman</i>	E166
Predominance of renal and absence of hepatic metabolism of pancreatic polypeptide in the dog <i>W. Hagopian, E. G. Lever, D. Cohen, D. Emmanouel, K. S. Polonsky, W. Pugh, A. Moossa, and J. B. Jaspán</i>	E171
Cellular basis of insulin resistance in chronic uremia <i>B. L. Maloff, M. L. McCaleb, and D. H. Lockwood</i>	E178
Iodothyronine homeostasis in rat brain during hypo- and hyperthyroidism <i>M. B. Dratman, F. L. Crutchfield, J. T. Gordon, and A. S. Jennings</i>	E185
Hypothalamic hyperinsulinemia and obesity: role of adrenal glucocorticoids <i>B. M. King, A. R. Banta, G. N. Tharel, B. K. Bruce, and L. A. Frohman</i>	E194
Metabolic responses to intraduodenal glucose loading in insulin-infused diabetic dogs <i>R. W. Stevenson, H. Ørskov, J. A. Parsons, and K. G. M. M. Alberti</i>	E200

No. 3. SEPTEMBER 1983

ANNOUNCEMENT

Statistics Report #2	E209
----------------------	------

Metabolic concomitants of hypophagia during recovery from insulin-induced obesity in rats <i>I. Ramirez and M. I. Friedman</i>	E211
Regulation of conversion of thyroxine to triiodothyronine in perfused rat kidney <i>D. C. Ferguson and A. S. Jennings</i>	E220
Further observations of aldosterone response in barnacle muscle fibers <i>R. B. Tallitsch</i>	E230
Hepatic mitochondrial function in lean and obese Zucker rats <i>L. J. Brady and C. L. Hoppel</i>	E239
Endocrine basis for weight gain after fasting or VMH lesion in rats <i>L. Penicaud, C. Larue-Achagiotis, and J. Le Magnen</i>	E246
Characterization of α -keto acid transport across blood-brain barrier in rats <i>A. R. Conn, D. I. Fell, and R. D. Steele</i>	E253
Increase in pituitary dopaminergic receptors after monosodium glutamate treatment <i>M. L. Heiman and N. Ben-Jonathan</i>	E261
Hormones modulate adipocyte membrane potential ATP and lipolysis via free fatty acids <i>M. L. Vallano, M. Y. Lee, and M. Sonenberg</i>	E266
Upregulation of kidney adenylate cyclase in the egg-laying hen: role of estrogen <i>L. R. Forte, S. G. Langeluttig, H. V. Biellier, R. E. Poelling, L. Magliola, and M. L. Thomas</i>	E273
Angiotensin-mediated calcium efflux from adrenal glomerulosa cells <i>R. Foster and H. Rasmussen</i>	E281
Endocrine consequences of portacaval anastomosis in female rats <i>A. Shih-Hoellwarth, C. Lee, and N. B. Schwartz</i>	E288
Role of gluconeogenesis in epinephrine-stimulated hepatic glucose production in humans <i>L. Saccà, C. Vigorito, M. Cicala, G. Corso, and R. S. Sherwin</i>	E294

SPECIAL COMMUNICATIONS

- Calculation of substrate turnover rate in stable isotope tracer studies
K.-Y. Tserng and S. C. Kalhan

E308

ANNOUNCEMENTS

E312

No. 4. OCTOBER 1983

- Effects of PHI on hormonal secretion from perfused rat pancreas
J. Szczówka, D. Tendler, and S. Efendić E313
- Ketone body turnover during and after exercise in overnight-fasted and starved humans
F. Féry and E. O. Balasse E318
- Plasma clearance, transfer, and distribution of vitamin D₃ from intestinal lymph
S. Dueland, P. Helgerud, J. I. Pedersen, T. Berg, and C. A. Drevon E326
- Evidence for a longitudinal pathway in rat hypothalamus that controls FFA mobilization
C. C. Coimbra and R. H. Migliorini E332
- L-Leucine methyl ester stimulates insulin secretion and islet glutamate dehydrogenase
P. Knudsen, H. Kofod, Å. Lernmark, and C. J. Hedekov E338
- Partition of maternal glucose production between conceptus and maternal tissues in sheep
W. W. Hay, Jr., J. W. Sparks, R. B. Wilkening, F. C. Battaglia, and G. Meschia E347
- Glucose metabolism during lactation in the rat: quantitative and regulatory aspects
A.-F. Burnol, A. Leturque, P. Ferré, and J. Girard E351
- Stimulation of 24R,25-dihydroxyvitamin D₃ synthesis by metabolites of vitamin D₃
G. S. Reddy, G. Jones, S. W. Kooh, D. Fraser, and H. F. DeLuca E359
- Cerebral glucose metabolism during 30 minutes of moderate hypoxia and reoxygenation
D. Kintner, J. H. Fitzpatrick, Jr., J. A. Louie, and D. D. Gilboe E365
- Effects of ketosis on glucose flux in children and adults
M. W. Haymond, C. Howard, E. Ben-Galim, and D. C. DeVivo E373
- Altered regulation of cardiac glycogen metabolism in spontaneously diabetic rats
T. B. Miller, Jr. E379
- Effect of blood pH and ischemia on kinetic constants for cerebral glucose transport
J. M. Yanushka, D. J. Costello, and D. D. Gilboe E384
- Differential effects on microtubule-altering agents on β -cells during development
R. S. Hill and W. B. Rhoten E391
- Absence of hepatic extraction of pancreatic polypeptide in conscious dogs
T. Ishida, M. C. Y. Chou, J. Chou, R. M. Lewis, C. J. Hartley, M. Entman, J. R. Kimmel, and J. B. Field E401
- Effect of verapamil on renin and aldosterone in the dog and rat
M. W. Roy, G. P. Guthrie, Jr., F. P. Holladay, and T. A. Kotchen E410
- Cytotoxic effects of alloxan treatment in vitro on monolayer cultures of neonatal rat pancreas
K. C. Gorry, D. G. Baskin, and W. Y. Fujimoto E417

RAPID COMMUNICATIONS

- Glucagon suppression improves glucoregulation in moderate but not chronic severe diabetes
H. L. A. Lickley, F. W. Kemmer, K. Doi, and M. Vranic E424

No. 5. NOVEMBER 1983

- Epinephrine sensitivity with respect to metabolic rate and other variables in women
L. Sjöström, Y. Schutz, F. Gudinchet, L. Hegnell, P. G. Pittet, and E. Jéquier E431

Splanchnic glucose metabolism during leg exercise in 60-hour-fasted human subjects <i>O. Björkman and L. S. Eriksson</i>	E443
A potassium-induced mitochondrial protein related to aldosterone biosynthesis <i>C. Meuli and J. Müller</i>	E449
Organ and plasma metabolism of neurotensin in sheep <i>A. Shulkes, D. R. Fletcher, and K. J. Hardy</i>	E457
Absorption, distribution, and transport of vitamin D ₃ and 25-hydroxyvitamin D ₃ in the rat <i>S. Dueland, J. I. Pedersen, P. Helgerud, and C. A. Drevon</i>	E463
Role of hexose monophosphate shunt in parathyroid hormone secretion <i>J. J. Morrissey and S. Klahr</i>	E468
Estimation of glucose carbon recycling and glucose turnover with [U- ¹³ C]glucose <i>K.-Y. Tserng and S. C. Kalhan</i>	E476
[Leu ^{B24}]insulin is an insulin agonist at the liver in vivo <i>D. P. Figlewicz, J. D. Best, H. S. Tager, and G. J. Taborsky, Jr.</i>	E483
Vasopressin, ACTH, and blood pressure during hypoxia induced at different rates <i>H. Raff, J. Shinsako, L. C. Keil, and M. F. Dallman</i>	E489
In vitro regulation of human monocyte insulin receptors by insulin and 1-methyl-3-isobutylxanthine <i>R. H. Whitson and S. A. Kaplan</i>	E494
Interaction of atropine with naloxone to alter anterior pituitary hormone secretion <i>X. Y. Huang and S. M. McCann</i>	E502
Regulation of protein synthesis in lung by amino acids and insulin <i>J. M. Besterman, C. A. Watkins, and D. E. Rannels</i>	E508
Effects of housing and chronic cannulation on plasma ACTH and corticosterone in the rat <i>K. D. Fagin, J. Shinsako, and M. F. Dallman</i>	E515
Response of liver glycogen synthase and phosphorylase to in vivo glucose and glucose analogues <i>F. Q. Nuttall, J. W. Theen, C. Niewoehner, and D. P. Gilboe</i>	E521

No. 6. DECEMBER 1983

EDITORIAL

Journals in the eighties	E529
<hr/>	
Suppression of renin secretion by insulin: dependence on extracellular calcium <i>A. J. Cohen, P. Laurens, and J. C. S. Fray</i>	E531
Effects of β -adrenergic blockade on lateral hypothalamic lesion-induced thermogenesis <i>S. W. Corbett, L. N. Kaufman, and R. E. Keesey</i>	E535
Autonomic nervous control of pancreatic somatostatin secretion <i>J. J. Holst, S. L. Jensen, S. Knuhtsen, and O. V. Nielsen</i>	E542
Cyclic AMP changes in guinea pig mammary gland and milk <i>R. F. Loizzi</i>	E549
Control of brown adipose tissue lipolysis and respiration by adenosine <i>D. Szillat and L. J. Bukowiecki</i>	E555
Altered sensitivity of chronic diabetic rat heart to calcium <i>D. R. Bielefeld, C. S. Pace, and B. R. Boshell</i>	E560
Hyperosmolarity and cardiac function in chronic diabetic rat heart <i>D. R. Bielefeld, C. S. Pace, and B. R. Boshell</i>	E568
Interactions of cold exposure and starvation on glucose tolerance and insulin response <i>A. L. Vallerand, J. Lupien, and L. J. Bukowiecki</i>	E575
Suppression of norepinephrine-induced thermogenesis in brown adipose tissue by fasting <i>M. Hayashi and T. Nagasaka</i>	E582

Human pancreatic GRF stimulates phosphatidylinositol labeling in cultured anterior pituitary cells <i>P. L. Canonico, M. J. Cronin, M. O. Thorner, and R. M. MacLeod</i>	E587
A role for endogenous prostaglandin E in biphasic pattern of insulin release in humans <i>D. Giugliano, P. Di Pinto, R. Torella, N. Frascolla, F. Saccomanno, N. Passariello, and F. D'Onofrio</i>	E591
Evidence of a paracrine role for pancreatic somatostatin in vivo <i>G. J. Taborsky, Jr.</i>	E598
Protein metabolism in skeletal muscle, diaphragm, and heart of diabetic rats <i>V. M. Pain, E. C. Albertse, and P. J. Garlick</i>	E604
Splanchnic clearance of plasma vasopressin in the dog: evidence for prehepatic extraction <i>K. Matsui, L. Share, D. P. Brooks, J. T. Crofton, and R. W. Rockhold</i>	E611
Direct α -adrenergic stimulation of hepatic glucose production in human subjects <i>S. G. Rosen, W. E. Clutter, S. D. Shah, J. P. Miller, D. M. Bier, and P. E. Cryer</i>	E616
<hr/>	
<i>Subject Index to Volume 8</i>	E627
<i>Author Index to Volume 8</i>	E633

American Journal of Physiology: Gastrointestinal and Liver Physiology

No. 1. JULY 1983

HEPATIC TRANSPORT KINETICS

Kinetic interpretation of hepatic multiple-indicator dilution studies <i>C. A. Goresky</i>	G1
Hepatic uptake of albumin-bound substances: albumin receptor concept <i>R. K. Ockner, R. A. Weisiger, and J. L. Gollan</i>	G13
<hr/>	
Does substance P comediate with acetylcholine in nerves of opossum esophageal muscularis mucosa? <i>T. Domoto, J. Jury, I. Berezin, J. E. T. Fox, and E. E. Daniel</i>	G19
Simultaneous estimation of arteriolar, capillary, and shunt blood flow of the gut mucosa <i>P. K. Dinda, M. G. Buell, L. R. DaCosta, and I. T. Beck</i>	G29
Differential transit of liquids and solid residue through the human ileum <i>P. Kerlin and S. Phillips</i>	G38
Role of protein phosphorylation in regulating rat submandibular mucin secretion <i>D. O. Quissell, L. M. Deisher, and K. A. Barzen</i>	G44
Horseradish peroxidase transport across rabbit jejunum and Peyer's patches in vitro <i>R. Ducroc, M. Heyman, B. Beaufriere, J. L. Morgat, and J. F. Desjeux</i>	G54
Importance of perfusate hematocrit for insulin- and glucagon-induced choleresis in the perfused rat liver <i>O. Ø. Thomsen and J. A. Larsen</i>	G59
Differentiation among inhibitory actions of omeprazole, cimetidine, and SCN ⁻ on gastric acid secretion <i>B. Wallmark, B.-M. Jaresten, H. Larsson, B. Ryberg, A. Brändström, and E. Fellenius</i>	G64
Effect of bile and bile acids on binding of intrinsic factor to cobalamin and intrinsic factor-cobalamin complex to ileal receptor <i>B. Seetharam, M. Jimenez, and D. H. Alpers</i>	G72
Regionally perfused fatty acids augment acid-induced canine pancreatic secretion <i>A. S. Fink, M. Luxenburg, and J. H. Meyer</i>	G78
Intraduodenal emulsions of oleic acid augment acid-induced canine pancreatic secretion <i>A. S. Fink and J. H. Meyer</i>	G85
Arachidonic acid stimulates mucin secretion in prairie dog gallbladder <i>J. T. LaMont, B. S. Turner, D. DiBenedetto, R. Handin, and A. I. Schafer</i>	G92
Cell site and time course of DNA synthesis in pancreas after caerulein and secretin <i>T. E. Solomon, M. Vanier, and J. Morisset</i>	G99
Metabolism of triglyceride by in vitro tandem-perfused rat liver and hind end <i>B. D. Schirmer, W. J. Kortz, R. S. Jones, and S. H. Quarfordt</i>	G106
Mild irritants prevent gastric necrosis through "adaptive cytoprotection" mediated by prostaglandins <i>A. Robert, J. E. Nezamis, C. Lancaster, J. P. Davis, S. O. Field, and A. J. Hanchar</i>	G113
Altered jejunal macromolecular barrier induced by α -dihydroxy deconjugated bile salts <i>S. Teichberg, E. McGarvey, M. A. Bayne, and F. Lifshitz</i>	G122
Basal-lateral and intracellular membrane populations of rat exorbital lacrimal gland <i>A. K. Mircheff, C. N. Conteas, C. C. Lu, N. A. Santiago, G. M. Gray, and L. G. Lipson</i>	G133
Mechanisms responsible for SCN increase in resistance of in vitro frog gastric mucosa <i>W. S. Rehm, T.-C. Chu, M. Schwartz, and G. Carrasquer</i>	G143

Pharmacological and physiological doses of insulin and determinants
of bile flow in dogs

C. A. Garberoglio, H. M. Richter III, A. Henarejos, A. R. Moossa,
and A. L. Baker

G157

ANNOUNCEMENTS

G164

No. 2. AUGUST 1983

EDITORIAL REVIEW

Ca²⁺ in the control of active intestinal Na and Cl transport:
involvement in neurohumoral action

M. Donowitz

G165

Effect of pancreatic polypeptide on canine migrating motor complex and plasma motilin

K. E. Hall, N. E. Diamant, T. Y. El-Sharkawy, and G. R. Greenberg

G178

Use of ¹²⁵I-secretin to identify and characterize high-affinity
secretin receptors on pancreatic acini

R. T. Jensen, C. G. Charlton, H. Adachi, S. W. Jones,
T. L. O'Donohue, and J. D. Gardner

G186

Effects of Met-enkephalin and naloxone on gastric emptying
and secretion in rhesus monkeys

P. T. Shea-Donohue, N. Adams, J. Arnold, and A. Dubois

G196

Effect of histamine on microvascular permeability in the rat stomach

H. Nagata and P. H. Guth

G201

Bimodal regulation of pancreatic exocrine function in vitro by somatostatin-28

J. P. Esteve, N. Vaysse, C. Susini, J. M. Kunsch, D. Fourmy,
L. Pradayrol, E. Wunsch, L. Moroder, and A. Ribet

G208

Morphine versus motilin in the initiation of migrating myoelectric complexes

S. Sarna, R. E. Condon, and V. Cowles

G217

Inhibitory action of somatostatin on isolated gastric glands and parietal cells

C. S. Chew

G221

Relative effects of systemic pH, PCO₂, and bicarbonate concentration
on ileal ion transport

A. N. Charney and L. P. Haskell

G230

Characterization of dogfish gastric mucosa under hyperbaric conditions

G. W. Kidder III

G236

Brain stem response to phasic gastric distension

W. D. Barber and T. F. Burks

G242

Stimulation of motilin release by bombesin in dogs

P. Poitras, D. Tassé, and P. Laprise

G249

Determinants of flow across isolated gastroduodenal junctions of cats and rabbits

K. Schulze-Delrieu and J. P. Wall

G257

Dual effects of electrical stimulation of ventromedial hypothalamic neurons on
gastric acid secretion in rats

T. Ishikawa, M. Nagata, and Y. Osumi

G265

Contraction and [³H]QNB binding in collagenase isolated fundic smooth muscle cells

E. R. Seidel and L. R. Johnson

G270

Cause-and-effect relationship between motilin and migrating myoelectric complexes

S. Sarna, W. Y. Chey, R. E. Condon, W. J. Dodds, T. Myers, and T.-M. Chang

G277

Ischemia-induced vascular changes: role of xanthine oxidase and hydroxyl radicals

D. A. Parks and D. N. Granger

G285

Effects of neuronal stimulation on mucosal transport in guinea pig ileum

H. J. Cooke, K. Shonnard, and J. D. Wood

G290

Effect of luminal somatostatin on pentagastrin-stimulated gastric acid
secretion in the rat

R. Mörz, J. Prager-Petz, and H. Pointner

G297

Influence of α -cellulose on myoelectric activity of proximal canine colon <i>C. F. Burrows and A. M. Merritt</i>	G301
Some parameters of descending inhibition during colonic propulsion <i>R. Mancinelli, L. Marzio, M. Pescatori, A. Bertuzzi, S. Salinari, F. Serrao, C. Vulpio, and T. Emanuele</i>	G307
Biological activity of canine intestinal cholecystokinin-58 <i>V. E. Eysselein, C. W. Deveney, H. Sankaran, J. R. Reeve, Jr., and J. H. Walsh</i>	G313

RAPID COMMUNICATIONS

Vasopressin modulates liver regeneration in the Brattleboro rat <i>W. E. Russell and N. L. R. Bucher</i>	G321
---	------

No. 3. SEPTEMBER 1983

ANNOUNCEMENT

Statistics Report #2	G325
----------------------	------

EDITORIAL REVIEW

Sodium ions and the sodium pump: transport and enzymatic activity <i>J. H. Kaplan</i>	G327
--	------

Antral control of canine gastric emptying of solids <i>J. M. Becker and K. A. Kelly</i>	G334
Secretagogue regulation of $\text{Na}^+\text{-K}^+$ pump activity in pancreatic acinar cells <i>S. R. Hootman, S. A. Ernst, and J. A. Williams</i>	G339
Regulation of cytosolic free Ca^{2+} concentration in acinar cells of rat pancreas <i>H. Streb and I. Schulz</i>	G347
Effects of cholecystokinin and secretin on intestinal structure and function <i>H. Fine, G. M. Levine, and Y.-F. Shiau</i>	G358
Cholinergic stimulation of ouabain-sensitive respiration in rat submandibular gland <i>D. J. Stewart, D. J. Pon, and A. K. Sen</i>	G364
Peripheral sympathetic pathways to gastroduodenal region of the guinea pig <i>D. L. Kreulen, T. C. Muir, and J. H. Szurszewski</i>	G369
Carnitine transport in rat small intestine <i>R. D. Shaw, B. U. K. Li, J. W. Hamilton, A. L. Shug, and W. A. Olsen</i>	G376
Relation between osmotically induced hepatocyte enlargement and portal hypertension <i>J. C. Colman, R. S. Britton, H. Orrego, V. Saldivia, A. Medline, and Y. Israel</i>	G382
Gastric and duodenal surface mucus gel thickness in rat: effects of prostaglandins and damaging agents <i>S. McQueen, D. Hutton, A. Allen, and A. Garner</i>	G388
Rat pancreatic response to intestinal infusion of intact and hydrolyzed protein <i>G. M. Green and K. Miyasaka</i>	G394
Amino acid inhibition of bile acid uptake by isolated rat hepatocytes: relationship to dissipation of transmembrane Na^+ gradient <i>B. L. Blitzer, S. L. Ratoosh, and C. B. Donovan</i>	G399
CO_2 utilization and distribution during H^+ secretion by bullfrog fundic mucosa <i>J. G. Allison and J. J. Cullen</i>	G404
Hepatic biotransformation of two hydroxy-7-oxotaurine-conjugated bile acids in the dog <i>M. Nakagaki, R. G. Danzinger, A. F. Hofmann, and A. Roda</i>	G411
Dietary-induced rapid decrease of microvillar carbohydrase activity in rat jejunioileum <i>T. Goda, K. Yamada, S. Bustamante, and O. Koldovsky</i>	G418

Glucose absorption by in vitro perfused colon of the fetal rat <i>G. D. Potter, K. L. Schmidt, and R. Lester</i>	G424
Effects of alloxan diabetes and insulin in vivo on rat parotid gland <i>L. C. Anderson</i>	G431
A new technique for measuring intestinal calcium absorption in the rat <i>C. L. Marsh, A. D. LeBlanc, P. C. Johnson, and S. L. Pool</i>	G438

No. 4. OCTOBER 1983

EDITORIAL REVIEW

Adaptive regulation of sugar and amino acid transport by vertebrate intestine <i>W. H. Karasov and J. M. Diamond</i>	G443
<hr/>	
Antral gland cell column: a method for studying release of gastric hormones <i>B. Richelsen, J. F. Rehfeld, and L.-I. Larsson</i>	G463
Contraction-related, low-frequency components in canine electrogastrographic signals <i>E. J. van der Schee and J. L. Grashuis</i>	G470
Effect of motilin on the opossum upper gastrointestinal tract and sphincter of Oddi <i>I. Takahashi, R. Honda, W. J. Dodds, S. Sarna, J. Toouli, Z. Itoh, W. Y. Chey, W. J. Hogan, D. Greiff, and K. Baker</i>	G476
Electrical basis of contractions in the muscle layers of the pig colon <i>J. D. Huizinga, N. E. Diamant, and T. Y. El-Sharkawy</i>	G482
Binding of <i>Escherichia coli</i> heat-stable enterotoxin to receptors on rat intestinal cells <i>R. A. Giannella, M. Luttrell, and M. Thompson</i>	G492
A transcellular route for Na-coupled Cl transport in secreting pancreatic acinar cells <i>J. O'Doherty and R. J. Stark</i>	G499
Sodium and chloride transport across rabbit ileal brush border. I. Evidence for Na-H exchange <i>R. Knickelbein, P. S. Aronson, W. Atherton, and J. W. Dobbins</i>	G504
Response of rat jejunum to angiotensin III: pharmacology and mechanism of action <i>N. R. Levens</i>	G511
Permeability of pancreatic capillaries to small molecules <i>P. R. Kvietys, M. A. Perry, and D. N. Granger</i>	G519
Potentialiation of pepsinogen secretion from dispersed glands from rat stomach <i>J.-P. Raufman, D. K. Kasbekar, R. T. Jensen, and J. D. Gardner</i>	G525
Nicotinamide uptake and metabolism by chick intestine <i>S. A. Schuette and R. C. Rose</i>	G531
Prostaglandins and alkaline secretion from oxyntic, antral, and duodenal mucosa of the dog <i>S. J. Konturek, J. Tasler, J. Bilski, and J. Kania</i>	G539
Effect of rabbit antimotilin serum on myoelectric activity and plasma motilin concentration in fasting dog <i>K. Y. Lee, T.-M. Chang, and W. Y. Chey</i>	G547
Anomalous potential difference responses to changes in sodium concentration in the antrum of frog stomach <i>G. Carrasquer, D. Kissel, W. S. Rehm, and M. Schwartz</i>	G554
Methylprednisolone increases absorptive capacity of rabbit ileum in vitro <i>J. H. Sellin and R. C. DeSoigne</i>	G562
Restricted transport of cationic macromolecules across intestinal capillaries <i>M. A. Perry, J. N. Benoit, P. R. Kvietys, and D. N. Granger</i>	G568
Cl ⁻ requirement of acid secretion in isolated gastric glands <i>D. H. Malinowska, J. Cuppoletti, and G. Sachs</i>	G573

Neurohumoral control of colonic motility in the rabbit <i>W. J. Snape, Jr., and S. Shiff</i>	G582
Monoclonal antibodies against gastric H ⁺ +K ⁺ ATPase <i>A. Smolka, H. F. Helander, and G. Sachs</i>	G589
Pentagastrin potentiates nonadrenergic inhibitory neuromuscular transmission in orad stomach of the dog <i>P. F. Schmalz, K. G. Morgan, and J. H. Szurszewski</i>	G597

No. 5. NOVEMBER 1983

EDITORIAL REVIEW

Protective effects of prostaglandins against gastric mucosal damage: current knowledge and proposed mechanisms <i>T. A. Miller</i>	G601
Calcium flux in vivo in the rat duodenum and ileum during pregnancy and lactation <i>M. Toraason</i>	G624
Manganese action on pancreatic protein synthesis in normal and diabetic rats <i>M. Korc</i>	G628
Intestinal capillary exchange capacity and oxygen delivery-to-demand ratio <i>P. R. Kvietys, M. A. Perry, and D. N. Granger</i>	G635
Regulation of pepsinogen release from canine chief cells in primary monolayer culture <i>M. J. Sanders, D. A. Amirian, A. Ayalon, and A. H. Soll</i>	G641
Activity fronts in fed dogs: effect of a β -adrenergic agonist <i>R. Yanda and R. W. Summers</i>	G647
Taurocholate, but not taurodehydrocholate, increases biliary permeability to sucrose <i>J. Reichen and M. Le</i>	G651
Polyamines and intestinal growth—increased polyamine biosynthesis after jejunectomy <i>G. D. Luk and S. B. Baylin</i>	G656
Resolution of apical and basal-lateral membrane populations from rat exorbital gland <i>A. K. Mircheff, C. C. Lu, and C. N. Contreas</i>	G661
Corticosteroid alteration of active electrolyte transport in rat distal colon <i>E. S. Foster, T. W. Zimmerman, J. P. Hayslett, and H. J. Binder</i>	G668
Effects of inhibitors of cyclic nucleotide phosphodiesterase on actions of cholecystokinin, bombesin, and carbachol on pancreatic acini <i>J. D. Gardner, V. E. Sutliff, M. D. Walker, and R. T. Jensen</i>	G676
Intracellular bile acid transport in rat liver as visualized by electron microscope autoradiography using a bile acid analogue <i>F. J. Suchy, W. F. Balistreri, J. Hung, P. Miller, and S. A. Garfield</i>	G681
β -Adrenergic control of exocrine secretion by perfused rat pancreas in vitro <i>J. M. Lingard and J. A. Young</i>	G690
Gastrointestinal blood flow and oxygen consumption in awake newborn piglets: effect of feeding <i>P. T. Nowicki, B. S. Stonestreet, N. B. Hansen, A. C. Yao, and W. Oh</i>	G697
Action of natural glucagon on pancreatic acini: due to contamination by previously undescribed secretagogues <i>S. J. Pandol, V. E. Sutliff, S. W. Jones, C. G. Charlton, T. L. O'Donohue, J. D. Gardner, and R. T. Jensen</i>	G703
Effect of transport inhibitors on secretion by perfused rat submandibular gland <i>J. R. Martinez and N. Cassity</i>	G711

RAPID COMMUNICATIONS

Release of endogenous and labeled GABA from isolated guinea pig ileum <i>K. Taniyama, Y. Miki, M. Kusunoki, N. Saito, and C. Tanaka</i>	G717
--	------

EDITORIAL

Journals in the eighties	G723
<hr/>	
Regulation of antral gastrin content <i>L. R. Johnson and P. D. Guthrie</i>	G725
pH dependence of pepsinogen and acid secretion in isolated gastric glands <i>S. H. Norris and S. J. Hersey</i>	G730
Effects of KCl and insulin on benzimidazole-inhibited canine gastric secretion <i>B. I. Hirschowitz and J. Fong</i>	G739
Effects of neurotransmitter release on mucosal transport in guinea pig ileum <i>H. J. Cooke, K. Shonnard, G. Highison, and J. D. Wood</i>	G745
Gastric and duodenal HCO_3^- transport in vivo: influence of prostaglandins <i>L. A. Smeaton, B. H. Hirst, A. Allen, and A. Garner</i>	G751
Muscarinic receptors and guanylate cyclase in mammalian gastric glandular cells <i>D. J. Culp, J. M. Wolosin, A. H. Soll, and J. G. Forte</i>	G760
Effects of hematocrit on oxygenation of the isolated perfused rat liver <i>G. L. Riedel, J. L. Scholle, A. P. Shepherd, and W. F. Ward</i>	G769
Lack of interaction between acid and pepsinogen secretion in isolated gastric glands <i>S. J. Hersey, M. Miller, D. May, and S. H. Norris</i>	G775
Dantrolene and basal ileal sodium and chloride transport: involvement of calcium stores <i>M. Donowitz, S. Cusolito, L. Battisti, and G. W. G. Sharp</i>	G780
Systems analysis of intestinal hemodynamics and oxygenation <i>D. N. Granger and H. J. Granger</i>	G786
Cl^- and K^+ -related fluctuations of ionic current through oxyntic cells in frog gastric mucosa <i>W. Zeiske, T. E. Machen, and W. Van Driessche</i>	G797
Dihydroxy bile salt-induced alterations in NaCl transport across the rabbit colon <i>R. W. Freel, M. Hatch, D. L. Earnest, and A. M. Goldner</i>	G808
Role of tight-junctional pathways in bile salt-induced increases in colonic permeability <i>R. W. Freel, M. Hatch, D. L. Earnest, and A. M. Goldner</i>	G816
Neural control of acid-induced serotonin release from rabbit duodenum <i>J. Kellum, M. McCabe, J. Schneier, and M. Donowitz</i>	G824
<hr/>	
Subject Index to Volume 8	G833
Author Index to Volume 8	G841

American Journal of Physiology: Heart and Circulatory Physiology

No. 1. JULY 1983

Renal blood flow autoregulation in developing swine <i>N. M. Buckley, P. Brazeau, and I. D. Frasier</i>	H1
Electrotonic interactions in delayed propagation and block within the guinea pig SA node <i>S. L. Lipsius</i>	H7
A compartmental analysis of the splenic circulation in rat <i>R. J. Stock, E. V. Cilento, F. D. Reilly, and R. S. McCuskey</i>	H17
Effect of changes in magnesium ion concentration on cat cerebral arterioles <i>J. M. Seelig, E. P. Wei, H. A. Kontos, S. C. Choi, and D. P. Becker</i>	H22
Altered nicotinic sensitivity of AV node in surgically denervated canine hearts <i>D. V. Priola, M. B. Curtis, C. Anagnostis, and E. Martinez</i>	H27
Basal and maximal inotropic state in renal hypertensive dogs with cardiac hypertrophy <i>A. Broughton and P. I. Korner</i>	H33
Electrotonic inhibition and summation of impulse conduction in mammalian Purkinje fibers <i>C. Antzelevitch and G. K. Moe</i>	H42
Baroreflex open-loop gain and arterial pressure compensation in hemorrhagic hypotension <i>H. I. Chen and V. S. Bishop</i>	H54
Improved defibrillator waveform safety factor with biphasic waveforms <i>J. L. Jones and R. E. Jones</i>	H60
Blood flow and oxygen consumption in skeletal muscle during sympathetic stimulation <i>L. P. Thompson and D. E. Mohrman</i>	H66
Effects of age on mechanical and electrical performance of rat myocardium <i>J. M. Capasso, A. Malhotra, R. M. Remily, J. Scheuer, and E. H. Sonnenblick</i>	H72
Effect of coronary occlusion on arrhythmias and conduction in the ovine heart <i>D. E. Euler, J. F. Spear, and E. N. Moore</i>	H82
Effects of epinephrine on resting potential in normal and hypertrophied cardiac muscles <i>S. R. Houser, V. Burgis, F. Martin, and D. Weinberg</i>	H90
Cardiorenal hemodynamics and sodium excretion in rats with myocardial infarction <i>T. H. Hostetter, J. M. Pfeffer, M. A. Pfeffer, L. D. Dworkin, E. Braunwald, and B. M. Brenner</i>	H98
Norepinephrine content and disposition in large and small pulmonary artery of dog <i>D. K. Rorie and G. M. Tyce</i>	H104
Left ventricular systolic dynamics in terms of its chamber mechanical properties <i>S. G. Shroff, J. S. Janicki, and K. T. Weber</i>	H110
Relationship between weight gain and lymph flow in dogs lungs <i>R. E. Drake, R. L. Scott, and J. C. Gabel</i>	H125
Myocardial blood flow during exercise after gradual coronary occlusion in the dog <i>R. J. Bache and J. S. Schwartz</i>	H131
Effects of free radical generation on mouse pial arterioles: probable role of hydroxyl radicals <i>W. I. Rosenblum</i>	H139
Intercompartmental fluid shifts due to glucose release during hemorrhage in rabbits <i>V. Mohsenin and A. B. DuBois</i>	H143
Serotonin accumulation in granules of storage pool-deficient platelets of Chediak-Higashi cattle <i>K. M. Meyers, C. L. Seachord, K. Benson, M. Fukami, and H. Holmsen</i>	H150
Temperature effects on dog hindpaw series and parallel vascular circuits <i>C. H. Baker, D. L. Davis, B. G. Lindsey, and E. T. Sutton</i>	H159

SPECIAL COMMUNICATIONS

- Microphotometric determination of hematocrit in small vessels
A. R. Pries, G. Kanzow, and P. Gaehgens H167
- Continuous measurement of arteriovenous oxygen difference and $\dot{V}O_2$ by microcomputer
J. W. Kiel and A. P. Shepherd H178

No. 2. AUGUST 1983

- Hyaluronidase reversal of increased coronary vascular resistance in ischemic rat hearts
K. P. Sunnergren and M. J. Rovetto H183
- Action of an opiate receptor blocker on ovine cardiopulmonary responses to endotoxin
D. L. Traber, P. D. Thomson, J. E. Blalock, E. M. Smith, T. Adams, Jr., L. A. Sziebert, and L. D. Traber H189
- Hemodynamic effects of head-down tilt in normal subjects and sustained hypertensive patients
G. M. London, J. A. Levenson, M. E. Safar, A. C. Simon, A. P. Guerin, and D. Payen H194
- Blood pressure maintenance in awake dehydrated rats: renin, vasopressin, and sympathetic activity
M. Burnier, J. Biollaz, D. B. Brunner, and H. R. Brunner H203
- Impaired baroreflex control of vascular resistance in prehypertensive Dahl S rats
F. J. Gordon and A. L. Mark H210
- Effects of chronic volume overload on left ventricular response to tachycardia
H. Pouleur, M. F. Rousseau, M. Petein, H. Van Mechelen, and A. A. Charlier H218
- Endothelial albumin permeability measured with a new technique in perfused rabbit lung
D. F. Kern, D. Levitt, and D. Wangenstein H229
- Myoglobin oxygenation remains constant during the cardiac cycle
N. Makino, H. Kanaide, R. Yoshimura, and M. Nakamura H237
- Decreased myocardial Na^+-K^+ -ATPase activity in one-kidney, one-clip hypertensive rats
D. L. Clough, M. B. Pamnani, and F. J. Haddy H244
- Kinetics of rouleaux formation using TV image analyzer. I. Human erythrocytes
T. Shiga, K. Imaizumi, N. Harada, and M. Sekiya H252
- Kinetics of rouleaux formation using TV image analyzer. II. Rat erythrocytes
T. Shiga, K. Imaizumi, N. Maeda, and K. Kon H259
- Blood flow to different skeletal muscle fiber types during contraction
B. G. Mackie and R. L. Terjung H265
- Cardiac and splenic norepinephrine turnovers in endotoxic rats
B. J. Pardini, S. B. Jones, and J. P. Filkins H276
- Effects of hypoproteinemia on fluid volumes and arterial pressure
R. D. Manning, Jr., and A. C. Guyton H284
- Susceptibilities of cardiac myofibrillar proteins to cathepsin D-catalyzed degradation
T. L. Jones, E. A. Ogunro, A. M. Samarel, A. G. Ferguson, and M. Lesch H294
- Pulmonary hypertension and ECG changes from monocrotaline pyrrole in the rat
L. H. Bruner, K. S. Hilliker, and R. A. Roth H300
- Cardiovascular changes from expiration to inspiration during IPPV
W. P. Santamore, J. L. Heckman, and A. A. Bove H307
- Effect of tolbutamide on myocardial energy metabolism
J. H. Kramer, W. G. Lampson, and S. W. Schaffer H313
- Adrenergic control in three artery segments of diminishing diameter in rabbit ear
M. P. Owen, J. G. Walmsley, M. F. Mason, R. D. Bevan, and J. A. Bevan H320
- Direct measurement of left ventricular interstitial adenosine
F. Hanley, L. M. Messina, R. W. Baer, P. N. Uhlig, and J. I. E. Hoffman H327
- Partial isolation of an endogenous norepinephrine uptake inhibitor in canine plasma
W. Freas, A. Carrillo, L. DiMarzio, F. J. Haddy, and S. M. Muldoon H336

Ca depletion and repletion in rat heart: age-dependent changes in the sarcolemma <i>J. S. Frank and T. L. Rich</i>	H343
The cardiac cycle: regulation and energy oscillations <i>J. Wikman-Coffelt, R. Sievers, R. J. Coffelt, and W. W. Parmley</i>	H354
Substrate dependence of myocardial response to hypoxia in the presence of theophylline <i>T. R. Snow and T. Caspar</i>	H363
Capillarity and fiber types in the cremaster muscle of rat and hamster <i>I. H. Sarelius, L. C. Maxwell, S. D. Gray, and B. R. Duling</i>	H368

ANNOUNCEMENTS

H375

No. 3. SEPTEMBER 1983

ANNOUNCEMENT

Statistical Report #2	H377
-----------------------	------

Length-dependent sensitivity at lengths greater than L_{max} in vascular smooth muscle <i>J. M. Price, D. L. Davis, and E. B. Knauss</i>	H379
Transfer function through regional cerebral cortex evaluated by a photoelectric method <i>M. Tomita, F. Gotoh, T. Amano, N. Tanahashi, M. Kobari, T. Shinohara, and B. Mihara</i>	H385
Vasopressin and renin responses to hemorrhage in conscious, cardiac-denervated dogs <i>B. C. Wang, W. D. Sundet, M. O. K. Hakumäki, and K. L. Goetz</i>	H399
Protection of ischemic rabbit myocardium by glutamic acid <i>J. A. Bittl and K. I. Shine</i>	H406
Evaluation of methods for estimating infarct size by myosin LC2: comparison with cardiac enzymes <i>R. Nagai, C.-C. Chiu, K. Yamaoki, Y. Ohuchi, S. Ueda, K. Imataka, and Y. Yazaki</i>	H413
Abnormal baroreflex control in renal hypertension is due to abnormal baroreceptors <i>G. B. Guo and M. D. Thames</i>	H420
Intrarenal flow of microspheres and red blood cells: skimming in slit and tube models <i>E. S. Øjford and G. Clausen</i>	H429
Evidence against local neural mechanism for intestinal postprandial hyperemia <i>R. A. Nyhof and C. C. Chou</i>	H437
Influence of circulating NE and Epi on adipose tissue vascular resistance and lipolysis in humans <i>P. Hjerdahl and B. Linde</i>	H447
Determinants of systemic zero-flow arterial pressure <i>M. J. Brunner, A. S. Greene, K. Sagawa, and A. A. Shoukas</i>	H453
Effects of histamine receptor stimulation on regional myocardial blood flow <i>C. W. Christensen, G. J. Gross, H. F. Hardman, H. L. Brooks, and D. C. Wartier</i>	H461
Adenosine reduces catecholamine contractile responses in oxygenated and hypoxic atria <i>J. G. Dobson, Jr.</i>	H468
Interaction between adenosine and inotropic interventions in guinea pig atria <i>J. G. Dobson, Jr.</i>	H475
Cardiovascular responses to graded reductions in hindlimb perfusion in exercising dogs <i>C. R. Wyss, J. L. Ardell, A. M. Scher, and L. B. Rowell</i>	H481
Sympathetic effect on cerebral blood flow regulation in hypoxic newborn lambs <i>L. C. Wagerle, T. M. Heffernan, L. M. Sacks, and M. Delivoria-Papadopoulos</i>	H487
Permeability of single capillaries to intermediate-sized colored solutes <i>F. E. Curry, V. H. Huxley, and R. H. Adamson</i>	H495
Postnatal regulation of 2,3-DPG in sheep erythrocytes <i>P. A. Mueggler, S. Carpenter, and J. A. Black</i>	H506

SPECIAL COMMUNICATIONS

- Local cerebral PO₂, PCO₂, and blood flow measurements by mass spectrometry
J. Seylaz, E. Pinard, P. Meric, and J.-L. Correze H513
- A method for evaluation of blood substitutes in the conscious animal
T. H. Goodin, W. P. Clarke, K. Taylor, R. Eccles, R. P. Geyer, and L. E. McCoy H519
- Chronic renal venous catheterization in fetal sheep
H. S. Iwamoto and A. M. Rudolph H524
-

RAPID COMMUNICATIONS

- Caffeine-induced current in embryonic heart cells: time course and voltage dependence
W. T. Clusin, R. Fischmeister, and R. L. DeHaan H528
-

LETTERS TO THE EDITOR

- Prediction of myocardial O₂ demand
G. Elzinga, C. M. B. Duwel, P. Duyst, G. J. van den Horn, A. H. C. A. Wiechmann, and N. Westerhof; J. Vinten-Johansen, H. W. Duncan, J. G. Finkenbergh, M. C. Hume, J. M. Robertson, R. J. Barnard, and G. D. Buckberg H533

No. 4. OCTOBER 1983

INVITED REVIEW

- Control of cardiac contractility at the cellular level
R. A. Chapman H535
-
- Modification of lymph during passage through the lymph node: effect of histamine
M. B. Maron H553
- Myocardial adaptations to endurance exercise in aged rats
J. W. Starnes, R. E. Beyer, and D. W. Edington H560
- Allometric relations of cardiovascular function in birds
B. R. Grubb H567
- Splanchnic and renal contributions to circulatory homeostasis in sodium depletion
S. F. Echtenkamp, J. O. Davis, R. H. Freeman, J. R. Dietz, and D. Villarreal H573
- Effect of caval occlusion on the magnitude of unipolar atrial electrograms in dogs
R. A. Bedont, J. A. Abildskov, R. L. Lux, and L. S. Green H580
- Secondary AV conduction responses during tonic vagal stimulation
P. Martin H584
- Intrinsic heart rate in the dog determined by pharmacologic denervation
J. R. Brunsting, H. A. Schuil, and W. G. Zijlstra H592
- Differences in K⁺-induced relaxation of canine femoral and renal arteries
R. D. Bukoski, C. L. Seidel, and J. C. Allen H598
- Ouabain binding, Na⁺-K⁺-ATPase activity, and ⁸⁶Rb uptake of canine arteries
R. D. Bukoski, C. L. Seidel, and J. C. Allen H604
- Onset of relaxation in cardiac muscle segments
J. F. Rondinone, D. A. Martyn, and L. L. Huntsman H610
- Modification of lymph by lymph nodes. II. Effect of increased lymph node venous blood pressure
T. H. Adair and A. C. Guyton H616
- Rabbit aortic medial thickness under relaxed and specified simulated in vivo conditions
G. Schneiderman, W. F. Pritchard, C. A. Ramirez, C. K. Colton, K. A. Smith, and M. B. Stemerman H623
- Avian renal portal valve: a reexamination of its innervation
M. E. Burrows, E. J. Braun, and S. P. Duckles H628

Release of norepinephrine from sympathetic nerve efferents by bilateral carotid occlusion <i>D. S. Reison, J. A. Oliver, R. R. Sciacca, and P. J. Cannon</i>	H635
Hyperreactivity of coronary vasculature in platelet-perfused hearts from diabetic rats <i>D. K. Reibel, D. M. Roth, L. Lefer, and A. M. Lefer</i>	H640
Elevated sympathetic response of epicardium proximal to healed myocardial infarction <i>M. S. Gaide, R. J. Myerburg, P. L. Kozlovskis, and A. L. Bassett</i>	H646
Effects of calcium channel blockers on isolated carotid baroreceptors and baroreflex <i>C. M. Heesch, B. M. Miller, M. D. Thames, and F. M. Abboud</i>	H653
Sodium depletion induces adrenergic potentiation at prejunctional site <i>P. C. Wong and B. G. Zimmerman</i>	H662
Angiotensin causes vasoconstriction during hemorrhage in baroreceptor-denervated dogs <i>D. B. Averill, A. M. Scher, and E. O. Feigl</i>	H667
Developmental changes in oxygenation and circulatory responses to hypoxemia in lambs <i>D. Sidi, J. R. G. Kuipers, D. Teitel, M. A. Heymann, and A. M. Rudolph</i>	H674
Prevention of two-kidney, one-clip renal hypertension in rat by ablation of AV3V tissue <i>J. R. Haywood, G. D. Fink, J. Buggy, S. Boutelle, A. K. Johnson, and M. J. Brody</i>	H683
Thermodilution method overestimates low cardiac output in humans <i>A. van Grondelle, R. V. Ditchey, B. M. Groves, W. W. Wagner, Jr., and J. T. Reeves</i>	H690
In vivo esterification of a synthetic ^{125}I -labeled fatty acid into cardiac glycerolipids <i>K. R. Chien, A. Han, J. White, and P. Kulkarni</i>	H693
Both protein and blood cells reduce coronary microvascular permeability to macromolecules <i>P. F. McDonagh</i>	H698

RAPID COMMUNICATIONS

Plasma-soluble marker for intraorgan regional flows <i>S. E. Little and J. B. Bassingthwaite</i>	H707
---	------

No. 5. NOVEMBER 1983

Swimming exercise, thyroid state, and the distribution of myosin isoenzymes in rat heart <i>E. D. Pagani and R. J. Solaro</i>	H713
Effects of catecholamines on cardiac chronotropic response to vagal stimulation in the dog <i>C. Chassaing, P. Duchene-Marullaz, and M. J. Veyrac</i>	H721
Microvascular heparinlike species with anticoagulant activity <i>J. A. Marcum, L. Fritze, S. J. Galli, G. Karp, and R. D. Rosenberg</i>	H725
Hemodynamic changes induced by reversal of early and late renovascular hypertension <i>G. I. Russell, R. F. Bing, J. D. Swales, and H. Thurston</i>	H734
Regional circumferential lengthening patterns in canine left ventricle <i>W. Y. W. Lew and M. M. LeWinter</i>	H741
Effect of vasopressin antagonist and saralasin on regional blood flow following hemorrhage <i>C. C. Y. Pang</i>	H749
Effect of Na^+ - or Ca^{2+} -filled liposomes on electrical activity of cultured heart cells <i>G. Bakaly, N. Sperelakis, Y. Elishalom, and Y. Barenholz</i>	H756
Increased adrenal catecholamines in salt-sensitive genetically hypertensive Dahl rats <i>J. M. Saavedra, R. Del Carmine, R. McCarty, P. Guicheney, V. Weise, and J. Iwai</i>	H762

Circulatory and humoral responses of sympathectomized fetal sheep to hypoxemia <i>H. S. Iwamoto, A. M. Rudolph, B. L. Mirkin, and L. C. Keil</i>	H767
Left ventricular interaction with arterial load studied in isolated canine ventricle <i>K. Sunagawa, W. L. Maughan, D. Burkhoff, and K. Sagawa</i>	H773
Quantitative relation between sites of atrial impulse origin and cycle length <i>J. P. Boineau, R. B. Schuessler, W. R. Roeske, L. J. Autry, C. B. Miller, and A. C. Wylds</i>	H781
Vasodilator capacity of contralateral kidney in Goldblatt hypertensive dog <i>B. G. Zimmerman and R. D. Largent</i>	H790
Arteriolar responses to elevation of venous and arterial pressures in cat mesentery <i>M. E. Burrows and P. C. Johnson</i>	H796
Enhanced sensitivity of diabetic hearts to α -adrenoceptor stimulation <i>S. E. Downing, J. C. Lee, and R. R. Fripp</i>	H808
Regional venous return: nitroprusside effect in normal and chronically congested dogs <i>R. L. Engler, G. L. Freeman, and J. W. Covell</i>	H814
Quantitative histochemistry of canine cardiac Purkinje fibers <i>C. G. Henry and O. H. Lowry</i>	H824
Isolated myocytes from adult canine left ventricle: Ca^{2+} tolerance, electrophysiology, and ultrastructure <i>K. Hewett, M. J. Legato, P. Danilo, Jr., and R. B. Robinson</i>	H830
Medial morphometry and mechanics of sequential rabbit ear arteries and myograph ring segments <i>J. G. Walmsley, M. P. Owen, and J. A. Bevan</i>	H840
Kinase II-dependent formation of angiotensins II and III in the hepatic circulation <i>S. L. Britton, G. Thomas, C. Daniel, and T. F. Ronau</i>	H849
Physiological and metabolic characterization of a cardiomyopathy induced by chronic copper deficiency <i>S. J. Kopp, L. M. Klevay, and J. M. Feliksik</i>	H855
Unbalanced plasma control of TxA_2 and PGI_2 synthesis in vitamin E-deficient rats <i>A. Falanga, M. G. Doni, F. Delaini, G. De Bellis Vitti, L. Imberti, M. B. Donati, and G. de Gaetano</i>	H867
Reflex cardiovascular responses to chemoreceptor stimulation in conscious dogs with cardiac hypertrophy <i>P. A. Murray and S. F. Vatner</i>	H871
Effects of ribose on cardiac metabolism and function in isoproterenol-treated rats <i>H.-G. Zimmer and H. Ibel</i>	H880

SPECIAL COMMUNICATIONS

Sensitive and selective assay for adenosine using high-pressure liquid chromatography with fluorometry <i>M. K. Jacobson, L. M. Hemingway, T. A. Farrell, and C. E. Jones</i>	H887
Isolation and morphology of calcium-tolerant feline ventricular myocytes <i>L. H. Silver, E. L. Hemwall, T. A. Marino, and S. R. Houser</i>	H891

ANNOUNCEMENTS

H897

No. 6. DECEMBER 1983

EDITORIAL

Journals in the eighties	H899
--------------------------	------

INVITED REVIEW

Channels, cables, networks, and the conduction of the cardiac impulse <i>P. F. Cranefield</i>	H901
--	------

Effects of blood-free and protein-free perfusion on CFC in the isolated cat hindlimb <i>P. D. Watson</i>	H911
Hemodynamic disturbances in the rat as a function of the number of microspheres injected <i>K. A. Stanek, T. L. Smith, W. R. Murphy, and T. G. Coleman</i>	H920
Acute hypoxemia and hypercapnia: increase in plasma catecholamines in conscious dogs <i>C. E. Rose, Jr., J. A. Althaus, D. L. Kaiser, E. D. Miller, and R. M. Carey</i>	H924
Heterogeneity in the response to dopamine of monkey cerebral and peripheral arteries <i>N. Toda</i>	H930
Isolated human coronary arteries in response to vasoconstrictor substances <i>N. Toda</i>	H937
Effects of indomethacin in conscious dogs with experimental high-output heart failure <i>D. Villarreal, J. O. Davis, R. H. Freeman, J. R. Dietz, and S. F. Echtenkamp</i>	H942
Total body vascular capacitance changes during high intracranial pressure in dogs <i>P. M. Stein, C. L. MacAnespie, and C. F. Rothe</i>	H947
Differences in myocardial α - and β -adrenergic receptor numbers in different species <i>A. Mukherjee, Z. Haghani, J. Brady, L. Bush, W. McBride, L. M. Buja, and J. T. Willerson</i>	H957
Mediation of pressor responses to cerebral ischemia by superficial ventral medullary areas <i>C. V. Rohlicek and C. Polosa</i>	H962
Cardiac sarcoplasmic reticulum function in insulin- or carnitine-treated diabetic rats <i>G. D. Lopaschuk, A. G. Tahiliani, R. V. S. V. Vadlamudi, S. Katz, and J. H. McNeill</i>	H969
Effect of pressure and stirring on in vitro aortic transmural ^{125}I -albumin transport <i>D. L. Fry</i>	H977
P-face particle density of freeze-fractured vertebrate cardiac plasma membrane <i>L. Kordylewski, T. Karrison, and E. Page</i>	H992
Effect of hypoxia and reoxygenation on mitochondrial function in neonatal myocardium <i>H. H. Young, T. Shimizu, K. Nishioka, T. Nakanishi, and J. M. Jarmakani</i>	H998
PGE_2 does not act at carotid sinus to raise arterial pressure in conscious sheep <i>B. A. Breuhaus and J. E. Chimoskey</i>	H1007
Centrally induced cardiovascular and sympathetic responses to hydrocortisone in rats <i>H. Takahashi, K. Takeda, H. Ashizawa, A. Inoue, S. Yoneda, M. Yoshimura, and H. Ijichi</i>	H1013
Role of O_2 -hemoglobin affinity on cerebrovascular response to carbon monoxide hypoxia <i>R. C. Koehler, R. J. Traystman, A. A. Rosenberg, M. L. Hudak, and M. D. Jones, Jr.</i>	H1019
Calcium channels resistant to organic calcium entry blockers in a rabbit vein <i>R. J. Winquist and E. P. Baskin</i>	H1024
Microvascular blood flow: evidence indicating a cubic dependence on arteriolar diameter <i>H. N. Mayrovitz and J. Roy</i>	H1031
Effects of prostaglandin E_1 in diabetic heart <i>T. B. Miller, Jr.</i>	H1039
A model of dynamic vagus-sinoatrial node interactions <i>D. C. Michaels, V. A. J. Slenter, J. J. Salata, and J. Jalife</i>	H1043
Effect of distal coronary pressure on rigid and compliant coronary stenoses <i>J. S. Schwartz</i>	H1054

SPECIAL COMMUNICATIONS

Computer registration of radioactive indicator-dilution curves <i>A. P. Shepherd, M. A. Perry, G. M. Alexander, D. N. Granger, G. L. Riedel, P. R. Kvietys, and C. P. Franke</i>	H1061
Doppler measurement of myocardial thickening with a single epicardial transducer <i>C. J. Hartley, L. A. Latson, L. H. Michael, C. L. Seidel, R. M. Lewis, and M. L. Entman</i>	H1066

RAPID COMMUNICATIONS

- Relaxation of canine saphenous vein following brief transmural nerve stimulation
T. W. Rooke, T. J. Rimele, and P. M. Vanhoutte H1073
- 5-Hydroxytryptamine can mediate endothelium-dependent relaxation
of coronary arteries
R. A. Cohen, J. T. Shepherd, and P. M. Vanhoutte H1077
- Dietary sodium restriction and development of hypertension in spontaneously
hypertensive rats
C. B. Toal and F. H. H. Leenen H1081
-

LETTERS TO THE EDITOR

- Comments on "Pericardial superfusion to measure cardiac interstitial
adenosine concentration"
S. W. Ely, R. M. Knabb, R. Rubio, and R. M. Berne; S. Kusachi and R. A. Olsson H1085
-

ANNOUNCEMENTS

- Subject Index to Volume 14* H1089
- Author Index to Volume 14* H1099
-

American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

No. 1. JULY 1983

INVITED OPINION

Network thermodynamics: a candidate for a common language for
theoretical and experimental biology

D. C. Mikulecky

R1

Phase-resetting action of light on the circadian activity rhythm of *Rattus exulans*

P. H. Gander and R. D. Lewis

R10

Post-cough heart rate response: influence of age, sex, and basal blood pressure

J. Y. Wei, J. W. Rowe, A. D. Kestenbaum, and S. Ben-Haim

R18

Electrolytes in slow and fast muscle fibers of humans at rest and
with dynamic exercise

G. Sjogaard

R25

Intracellular pH-temperature interactions of hepatocytes from American eels

P. J. Walsh and T. W. Moon

R32

Sodium chloride preference of genetically hypertensive and normotensive rats

R. Di Nicolantonio, F. A. O. Mendelsohn, and J. S. Hutchinson

R38

Control of ion transport by *Gillichthys mirabilis* urinary bladder

C. A. Loretz and H. A. Bern

R45

Integral as well as proportional adrenal responses to ACTH

M. E. Keller-Wood, J. Shinsako, and M. F. Dallman

R53

Differential sympathetic responses initiated by angiotensin and sodium chloride

J. C. Tobey, H. K. Fry, C. S. Mizejewski, G. D. Fink, and L. C. Weaver

R60

Stimulation of urinary acidification by insulin in the turtle bladder

J. A. L. Arruda

R69

Thermoregulatory responses to central injections of excess calcium in monkeys

C. V. Gisolfi, P. T. Wall, and W. R. Mitchell

R76

A further characterization of the effects of AV3V lesions on ingestive behavior

R. W. Lind and A. K. Johnson

R83

Active transport of calcium across the urinary bladder and colon
of the toad *Bufo marinus*

C. J. Rosoff, G. F. Baldwin, and P. J. Bentley

R91

Neonatal hyperthyroidism: effects on sympathetic responses to stress in adult rats

R. McCarty, R. F. Kirby, and P. C. Brunjes

R95

Regulation of canine platelet function. II. Catecholamines

K. M. Meyers, L. Y. Huston, and R. M. Clemmons

R100

Forearm blood flow and metabolism during stylized and unstylized states
of decreased activation

R. Jevning, A. F. Wilson, J. P. O'Halloran, and R. N. Walsh

R110

No. 2. AUGUST 1983

INVITED OPINION

Cellular mechanisms in shock and ischemia and their correction

I. H. Chaudry

R117

MODELING METHODOLOGY FORUM

Parameter estimation in linear functional relationships

E. M. Haacke and M. D. Goldman

R135

Cardiovascular functions during voluntary apnea in dogs <i>Y. C. Lin, E. L. Carlson, E. P. McCutcheon, and H. Sandler</i>	R143
Interhemispheric coupling coefficients: sex differences in brain neurochemistry <i>V. H. Denenberg and G. D. Rosen</i>	R151
Mechanisms of control of milk intake in suckling rats <i>C. P. Cramer and E. M. Blass</i>	R154
Effects of training on cardiorespiratory function in the horse <i>D. P. Thomas, G. F. Fregin, N. H. Gerber, and N. B. Ailes</i>	R160
Renal hemodynamic actions of angiotensin II: interaction with tubuloglomerular feedback <i>J. E. Hall and J. P. Granger</i>	R166
Gastric distension and short-term satiety in the rhesus monkey <i>J. B. Wirth and P. R. McHugh</i>	R174
Duodenal osmoconcentration and food intake in pigs after ingestion of hypertonic nutrients <i>T. R. Houpt, K. A. Houpt, and A. A. Swan</i>	R181
[¹³ C]bicarbonate kinetics in humans: intra- vs. interindividual variations <i>C. S. Irving, W. W. Wong, R. J. Shulman, E. O. Smith, and P. D. Klein</i>	R190
Individual variations in structure and function of human eccrine sweat gland <i>K. Sato and F. Sato</i>	R203
Distribution and discharge properties of airway receptors in the opossum, <i>Didelphis marsupialis</i> <i>J. P. Farber, J. T. Fisher, and G. Sant'Ambrogio</i>	R209
Effect of clorgyline (a MAO type A inhibitor) on locomotor activity in the Syrian hamster <i>L. Tamarkin, C. J. Craig, N. A. Garrick, and T. A. Wehr</i>	R215
Diving responses in ducks after acute barodenervation <i>D. R. Jones, W. K. Milsom, F. M. Smith, N. H. West, and O. S. Bamford</i>	R222
Role of luminal acidity in the pathogenesis of stress-induced gastroduodenal disease <i>B. H. Natelson and W. N. Tapp</i>	R230
Widespread neural excitation initiated from cardiac spinal afferent nerves <i>L. C. Weaver, R. L. Meckler, H. K. Fry, and S. Donoghue</i>	R241
Neural control of renal excretory function during behavioral stress in conscious dogs <i>J. P. Koepke, K. C. Light, and P. A. Obrist</i>	R251
Angiotensin II in the renal excretory response to behavioral stress in conscious dogs <i>J. P. Koepke and P. A. Obrist</i>	R259
Seasonal acclimatization in American goldfinches: the role of the pectoralis muscle <i>M. E. Yacoe and W. R. Dawson</i>	R265
Regulatory aspects of Na ⁺ transport in complex epithelia (frog skin) <i>E. G. Huf and D. C. Mikulecky</i>	R272
Hemodynamic responses to amygdaloid stimulation in spontaneously hypertensive rats <i>T. M. Galeno and M. J. Brody</i>	R281
Dehydration induces sodium depletion in rats, rabbits, and sheep <i>M. J. McKinley, D. A. Denton, J. F. Nelson, and R. S. Weisinger</i>	R287

RAPID COMMUNICATIONS

Selective regulation of brain and body temperatures in the squirrel monkey <i>C. A. Fuller and M. A. Baker</i>	R293
---	------

No. 3. SEPTEMBER 1983

INVITED OPINION—STATISTICS REPORT #2

Abuse of statistical packages: the case of the general linear model <i>C. F. Hofacker</i>	R299
--	------

MODELING METHODOLOGY FORUM

- Distributed model for drug delivery to CSF and brain tissue
J. M. Collins and R. L. Dedrick R303
-
- Upper thoracic sympathetic neuron responses to input from urinary bladder afferents
R. Schondorf, W. Laskey, and C. Polosa R311
- Circadian and arousal state influences on thermoregulation in the pigeon
H. C. Heller, R. Graf, and W. Rautenberg R321
- Effect of water deprivation on urinary excretion of PGE₂ in the dog
A. Zucker, A. Nasjletti, and E. G. Schneider R329
- Photoperiodic regulation of body mass, food intake, and reproduction in meadow voles
J. Dark, I. Zucker, and G. N. Wade R334
- Critical role of food amount for prefeeding corticosterone peak in rats
K.-I. Honma, S. Honma, and T. Hiroshige R339
- Multisegmental spinal sympathetic reflexes originating from the heart
L. C. Weaver, H. K. Fry, R. L. Meckler, and R. S. Oehl R345
- Glycogenolytic rates and cAMP in livers of rats running at different treadmill speeds
W. W. Winder, M. A. Beattie, and E. O. Fuller R353
- Increased β -adrenergic receptors in brown fat of winter-acclimatized Alaskan voles
D. D. Feist R357
- Relationship between sympathetic activity and diet-induced obesity in two rat strains
B. E. Levin, J. Triscari, and A. C. Sullivan R364
- Hyperinsulinemia in rats with hypothalamic obesity: effects of autonomic drugs and glucose
S. Inoue, Y. S. Mullen, and G. A. Bray R372
- An investigation of the age-related deficits in the febrile response of the rabbit
A. V. Ferguson, L. Baue, W. L. Veale, and K. E. Cooper R379
- Nascent and remnant lipoprotein turnover in rats: experimental design and simulation
N. Baker, H. J. Rostami, and J. Elovson R386
- Spontaneous obesity and weight loss: insulin action in the dormouse
R. B. Melnyk, N. Mrosovsky, and J. M. Martin R396
- Spontaneous obesity and weight loss: insulin binding and lipogenesis in the dormouse
R. B. Melnyk, N. Mrosovsky, and J. M. Martin R403
- Effects of guanethidine sympathectomy on ventromedial hypothalamic obesity
T. L. Powley, M. C. Walgren, and W. B. Laughton R408
- Brain and deep abdominal temperatures during induced fever in pregnant rabbits
E. F. Naccarato and W. S. Hunter R421
- Body temperature control of rat tail blood flow
E. R. Raman, M. F. Roberts, and V. J. Vanhuyse R426
- Differential pattern of sympathetic outflow during upper airway stimulation with smoke
D. F. Peterson, J. H. Coote, M. P. Gilbey, and H. A. Futuro-Neto R433
- Sequence of activation of ventrolateral and dorsal medullary sympathetic neurons
S. M. Barman and G. L. Gebber R438

RAPID COMMUNICATIONS

- Components of mucus of terrestrial slugs (Gastropoda)
I. Deyrup-Olsen, D. L. Luchtel, and A. W. Martin R448

No. 4. OCTOBER 1983

NONLINEARITIES IN BRAIN FUNCTION

- Introduction to Part 1
A. Garfinkel R453

A mathematics for physiology <i>A. Garfinkel</i>	R455
Dynamical models for physiology <i>R. H. Abraham</i>	R467
Qualitative mathematical models of endocrine systems <i>W. R. Smith</i>	R473
Temporal self-organization in biochemical systems: periodic behavior vs. chaos <i>A. Goldbeter and O. Decroly</i>	R478
From intermittency to transitivity in neuropsychobiological flows <i>A. J. Mandell</i>	R484
Introduction to Part 2 <i>D. O. Walter</i>	R495
Impact of a circadian clock on the timing of human sleep <i>A. T. Winfree</i>	R497
Lateralization of function in rats <i>V. H. Denenberg</i>	R505
Toward a physical approach to integrative physiology. I. Brain dynamics and physical causality <i>E. Başar</i>	R510

MODELING METHODOLOGY FORUM

Transient solutions of equations for countercurrent capillary exchange <i>L. D. Homer and P. K. Weathersby</i>	R534
---	------

Vasopressin in blood and third ventricle CSF of dogs in chronic experiments <i>C. Simon-Oppermann, D. Gray, E. Szczepańska-Sadowska, and E. Simon</i>	R541
Vasopressin in blood and third ventricle CSF during dehydration, thirst, and hemorrhage <i>E. Szczepańska-Sadowska, D. Gray, and C. Simon-Oppermann</i>	R549
Atypical amino acids inhibit histidine, valine, or lysine transport into rat brain <i>J. K. Tews and A. E. Harper</i>	R556
Kinetics of endogenously labeled plasma fibronectin: incorporation into tissues <i>D. C. Deno, T. M. Saba, and E. P. Lewis</i>	R564
Cardiovascular responses to noxious radiant heat in anesthetized cats <i>S. E. Abram, D. R. Kostreva, F. A. Hopp, and J. P. Kampine</i>	R576
Renal ammoniogenesis and acid excretion in the dogfish, <i>Squalus acanthias</i> <i>P. A. King and L. Goldstein</i>	R581
Renal ammonia excretion and production in goldfish, <i>Carassius auratus</i> , at low environmental pH <i>P. A. King and L. Goldstein</i>	R590
Genetic variation, chronic stress, and the central and peripheral noradrenergic systems <i>D. A. Blizard, L. S. Freedman, and B. Liang</i>	R600
Characteristics of afferent fiber innervation on acupuncture points zusanli <i>G.-W. Lu</i>	R606

RAPID COMMUNICATIONS

Naturalistic studies of human light exposure <i>N. Okudaira, D. F. Kripke, and J. B. Webster</i>	R613
---	------

No. 5. NOVEMBER 1983

EDITORIAL

Mones Berman—a special tribute <i>J. J. DiStefano III</i>	R617
Mones Berman—the man and his legacy to quantitative biology <i>J. E. Rall</i>	R619

MODELING METHODOLOGY FORUM

- Information content of data with respect to models
M. Berman and P. Van Eerdewegh R620
- Is the "pool-fraction" paradigm a valid model for assessment of in vivo turnover in non-steady state?
C. Cobelli, A. Ruggeri, T. Toffolo, A. Avogaro, and R. Nosadini R624
-
- Arterial pressure-urinary output relationship in DOCA-saline hypertensive rats
T. Sugai, Y. Nakagawa, K. Takeda, and S. Imai R633
- Canine visual acuity: retinal and cortical field potentials evoked by pattern stimulation
J. V. Odom, N. M. Bromberg, and W. W. Dawson R637
- Open-loop analysis of the pulmocutaneous baroreflex in the toad *Bufo marinus*
N. H. West and B. N. Van Vliet R642
- Metabolic adjustments to diving and recovery in the African lungfish
J. F. Dunn, P. W. Hochachka, W. Davison, and M. Guppy R651
- Energy balance and regulation of body weight after intestinal bypass surgery in rats
R. L. Atkinson, E. L. Brent, B. S. Wagner, and J. H. Whipple R658
- Simulation of calcium homeostasis: modeling and parameter estimation
S. Hurwitz, S. Fishman, A. Bar, M. Pines, G. Riesenfeld, and H. Talpaz R664
- A bladder contractility constant
J. C. Byrne and A. Tözeren R673
- Efferent inhibition of carotid body chemoreception in chronically hypoxic cats
S. Lahiri, N. Smatresk, M. Pokorski, P. Barnard, and A. Mokashi R678
- Carbohydrate feeding speeds reversal of enhanced glucose uptake in muscle after exercise
J. C. Young, S. M. Garthwaite, J. E. Bryan, L.-J. Cartier, and J. O. Holloszy R684
- Acid-base and ionic balance in *Ambystoma tigrinum* and *Necturus maculosus* during hypercapnia
D. F. Stiffler, B. L. Tufts, and D. P. Toews R689
- Does the autonomic nervous system regulate whole-body lymph flow?
G. G. Power and R. A. Brace R695
- Cerebrospinal fluid transients induced by hypercapnia
M. J. Fisher, S. R. Heisey, T. Adams, and D. L. Traxinger R701
- Lipoprotein lipase activity and lipolysis after swim training in obese Zucker rats
J. L. Walberg, M. R. C. Greenwood, and J. S. Stern R706
- Further in vivo evidence for antagonist-to-antidiuretic action of arginine vasopressin
S. Ishikawa, J. K. Kim, and R. W. Schrier R713
- Maternal blood volume and cardiac output during pregnancy: a hypothesis of endocrinologic control
L. D. Longo R720
- Cerebral metabolism in hypoglycemic and hyperglycemic fetal lambs
B. S. Richardson, A. R. Hohimer, J. M. Bissonnette, and C. M. Machida R730
- Decrease in adenylate cyclase activity in dog livers during endotoxic shock
S. Ghosh and M.-S. Liu R737
- Renal glomerular filtration rate and hepatic blood flow during voluntary diving in Weddell seals
R. W. Davis, M. A. Castellini, G. L. Kooyman, and R. Maue R743

No. 6. DECEMBER 1983

EDITORIAL

- Journals in the eighties R749

INVITED OPINION

- Gasser and Graham and spinal cord electrophysiology
T. Allison and C. C. Wood R751

EDITORIAL REVIEW

- Metabolic adjustments of small passerine birds for migration and cold
W. R. Dawson, R. L. Marsh, and M. E. Yacoe R755
-

MODELING METHODOLOGY FORUM

- Interspecies pharmacokinetic scaling and the Dedrick plots
H. Boxenbaum and R. Ronfeld R768
- Analysis of platelet aggregation using particle collision theory
T. M. E. Davis and E. Bown R776
-
- Effects of hypotonic, isotonic, and hypertonic fluids on thoracic duct lymph flow
R. A. Brace and G. G. Power R785
- Influence of left ventricular receptor stimulation on plasma vasopressin in conscious dogs
I. H. Zucker, A. J. Gorman, K. G. Cornish, L. J. Huffman, and J. P. Gilmore R792
- Effects of temperature on the circadian rhythm of pig-tailed macaques *Macaca nemestrina*
H. Tokura and J. Aschoff R800
- A possible role for the brain renin-angiotensin system in the regulation of LH secretion
M. K. Steele, R. V. Gallo, and W. F. Ganong R805
- Parabrachial units responding to stimulation of buffer nerves and forebrain in the cat
D. F. Cechetto and F. R. Calaresu R811
- Stimulation of pancreatic afferents reflexly activates the cardiovascular system in cats
G. A. Ordway, J. C. Longhurst, and J. H. Mitchell R820
- Metabolic organization of liver during spawning migration of sockeye salmon
C. J. French, P. W. Hochachka, and T. P. Mommsen R827
- Pulse-wave propagation in the arterial system of the diamond python *Morelia spilotes*
A. P. Avolio, M. F. O'Rourke, and M. E. D. Webster R831
- Systemic and renal effects of angiotensin II in the freshwater turtle *Pseudemys scripta elegans*
S. R. Brown, G. A. Stephens, and M. J. Todt R837
- Uterine blood flow in relation to endogenous hormones during estrous cycle and early pregnancy
H. Roman-Ponce, D. Caton, W. W. Thatcher, and R. Lehrner R843
- Uterine blood flow: periodic fluctuations of its rate during pregnancy
D. Caton, J. F. Pendergast, and F. W. Bazer R850
- Control of extracellular ions in skate brain during osmotic disturbances
H. F. Cserr, M. W. B. Bradbury, K. Mackie, and E. J. Moody R853
- Influence of daily sodium intake on vasopressin secretion and drinking in dogs
A. W. Cowley, Jr., M. M. Skelton, D. C. Merrill, E. W. Quillen, Jr., and S. J. Switzer R860
- Relative peripheral and central chemosensory responses to metabolic alkalosis
M. Pokorski and S. Lahiri R873
- Effects of blockade of brain angiotensin II receptors in conscious, sodium-deprived dogs
V. L. Brooks and I. A. Reid R881
- Esophageal desalination of seawater in flounder: role of active sodium transport
J. T. Parmelee and J. L. Renfro R888
- Role of calcium in cAMP-mediated effects in the elasmobranch rectal gland
T. J. Shuttleworth R894
- Preoptic recess lesions, body fluid compartments, and the renin-aldosterone system
S. L. Bealer and E. G. Schneider R901
- Effects on intravascular pressures of vasopressin and angiotensin II in dogs
P. Bie and J. Warberg R906

Effect of ganglionic blockade on catecholamine secretion in exercised dogfish <i>D. F. Opdyke, J. Bullock, N. E. Keller, and K. Holmes</i>	R915
Are peptides truly satiety agents? A method of testing for neurohumoral satiety effects <i>C. J. Billington, A. S. Levine, and J. E. Morley</i>	R920
Light-dark masking of circadian temperature and activity rhythms in squirrel monkeys <i>P. H. Gander and M. C. Moore-Ede</i>	R927

LETTERS TO THE EDITOR

Is there an absolute threshold for low-dose radiation? A statistical matter <i>V. H. Denenberg; A. S. Iberall</i>	R935
--	------

<i>Subject Index to Volume 14</i>	R939
<i>Author Index to Volume 14</i>	R947

American Journal of Physiology: Renal, Fluid and Electrolyte Physiology

No. 1. JULY 1983

EDITORIAL REVIEW

Renal nerves in the pathogenesis of hypertension in experimental animals and humans <i>R. E. Katholi</i>	F1
<hr/>	
Developmental pattern of water and electrolyte transport in rat superficial nephrons <i>M. Lelievre-Pegorier, C. Merlet-Benichou, N. Roinel, and C. de Rouffignac</i>	F15
Phosphate uptake by a kidney cell line (LLC-PK ₁) <i>C. A. Rabito</i>	F22
Autoregulation in vasa recta of the rat kidney <i>H. J. Cohen, D. J. Marsh, and B. Kayser</i>	F32
Effect of volume expansion and plasma chloride on function of the loop segment <i>B. B. Booker, R. H. Williams, and R. G. Luke</i>	F41
Effects of fluid intake on basal and vasopressin-responsive urinary prostaglandin E <i>H. T. Campbell, P. A. Craven, and F. R. DeRubertis</i>	F48
Effect of PGE ₂ on vasopressin-dependent cell cAMP in isolated single nephron segments <i>S. Torikai and K. Kurokawa</i>	F58
Renal hemodynamics in conscious rats: effects of anesthesia, surgery, and recovery <i>L. A. Walker, M. Buscemi-Bergin, and M. Gellai</i>	F67
Angiotensin in the hemodynamic response to chronic nephron obstruction <i>P. K. Carmines and G. A. Tanner</i>	F75
Demonstration of active potassium secretion in the late distal tubule <i>S. M. Jones and J. P. Hayslett</i>	F83
Effects of mineralocorticoids on Na ⁺ and K ⁺ excretion in the adrenalectomized rat <i>J.-D. Horisberger and J. Diezi</i>	F89
Changes in tubular basolateral membrane markers after chronic DOCA treatment <i>G. El Mernissi, D. Chabardès, A. Doucet, A. Hus-Citharel, M. Imbert-Teboul, F. Le Bouffant, M. Montégut, S. Siaume, and F. Morel</i>	F100
Immunohistochemical localization of carbonic anhydrase in postnatal and adult rat kidney <i>D. Brown, T. Kumpulainen, J. Roth, and L. Orci</i>	F110

RAPID COMMUNICATIONS

Alteration of renal baroreceptor by salt intake in control of plasma renin activity in conscious dogs <i>E. R. Farhi, J. R. Cant, and A. C. Barger</i>	F119
Video measurement of basolateral membrane hydraulic conductivity in the proximal tubule <i>L. W. Welling, D. J. Welling, and T. J. Ochs</i>	F123

No. 2. AUGUST 1983

EDITORIAL REVIEW

Angiotensin-dependent renal mechanisms in two-kidney, one-clip renal vascular hypertension <i>D. W. Ploth</i>	F131
<hr/>	
Metabolism and transport of L-glutamine and L-alanine by renal tubules of chickens <i>A. G. Craan, P. Vinay, G. Lemieux, and A. Gougoux</i>	F142

Mechanism of urate and <i>p</i> -aminohippurate transport in rat renal microvillus membrane vesicles <i>A. M. Kahn, S. Branham, and E. J. Weinman</i>	F151
Renal adaptation to alteration in dietary amino acid intake <i>A. L. Friedman, P. W. Albright, N. Gusowski, M. Padilla, and R. W. Chesney</i>	F159
Potassium secretion in the rabbit proximal straight tubule <i>A. G. Wasserstein and Z. S. Agus</i>	F167
Phosphate uptake by renal membrane vesicles of rabbits adapted to high and low phosphorus diets <i>L. Cheng, C. T. Liang, and B. Sacktor</i>	F175
Effects on renal hemodynamics of intra-arterial infusions of angiotensins I and II <i>L. Rosivall and L. G. Navar</i>	F181
pH effect on osmotic response of collecting tubules to vasopressin and 8-CPT-cAMP <i>M. Lorenzen, A. Taylor, and E. E. Windhager</i>	F188
Effect of pH and amiloride on the intrarenal formation of kinins <i>A. G. Scicli, M. A. Diaz, and O. A. Carretero</i>	F198
Effects of pH on bone calcium and proton fluxes in vitro <i>D. A. Bushinsky, N. S. Krieger, D. I. Geisser, E. B. Grossman, and F. L. Coe</i>	F204
Characteristics of NH_4^+ and NH_3 transport across the isolated turtle urinary bladder <i>J. H. Schwartz and M. Tripolone</i>	F210
Metabolic acidosis and parathyroidectomy increase Na^+ - H^+ exchange in brush border vesicles <i>D. E. Cohn, S. Klahr, and M. R. Hammerman</i>	F217
Effect of glucocorticoids on renal net glucose release in vivo in normal and diabetic rats <i>F. Kamiya, H. Kimura, T. Takeuchi, K. Kida, and H. Nakagawa</i>	F223
Fluidity of brush border and basolateral membranes from human kidney cortex <i>C. Le Grimellec, S. Carrière, J. Cardinal, and M.-C. Giocondi</i>	F227
Effect of betamethasone on Na-K-ATPase activity and basal and lateral cell membranes in proximal tubular cells during early development <i>Y. Igarashi, A. Aperia, L. Larsson, and R. Zetterström</i>	F232
Secretion of tetraethylammonium by proximal tubules of rabbit kidneys <i>C. Schäli, L. Schild, J. Overney, and F. Roch-Ramel</i>	F238
Effects of dopamine blockade on renal sodium excretion <i>J. C. Pelayo, R. D. Fildes, G. M. Eisner, and P. A. Jose</i>	F247
Effect of unilateral ureteral obstruction on metabolism of renal lipids in the rat <i>J. Tannenbaum, M. L. Purkerson, and S. Klahr</i>	F254
Nucleotide inhibition of phosphate transport in the renal proximal tubule <i>R. P. Lang, N. Yanagawa, E. P. Nord, L. Sakhrani, S.-H. Lee, and L. G. Fine</i>	F263

RAPID COMMUNICATIONS

Volume expansion predominantly inhibits proximal reabsorption of NaCl rather than NaHCO_3 <i>M. G. Cogan</i>	F272
--	------

No. 3. SEPTEMBER 1983

ANNOUNCEMENT

Statistics Report #2	F277
----------------------	------

EDITORIAL REVIEW

Water permeability and pathways in the proximal tubule <i>C. A. Berry</i>	F279
--	------

Intracellular calcium in the transmission of tubuloglomerular feedback signals <i>P. D. Bell and M. Reddington</i>	F295
---	------

Inhibitory effect of epinephrine on renal potassium secretion: a micropuncture study <i>R. A. DeFronzo, B. Stanton, G. Klein-Robbenhaar, and G. Giebisch</i>	F303
Effects of ouabain and furosemide on basolateral membrane Na efflux of frog skin <i>T. C. Cox and S. I. Helman</i>	F312
Renal nerves in renal adaptation to dietary sodium restriction <i>G. F. DiBona and L. L. Sawin</i>	F322
Demonstration of an intrinsic renal adaptation for K ⁺ conservation in short-term K ⁺ depletion <i>D. B. Ornt and R. L. Tannen</i>	F329
Maleic acid-induced reabsorptive dysfunction in the proximal and distal nephron <i>E. D. Brewer, H. O. Senekjian, A. Ince, and E. J. Weinman</i>	F339
Calcitonin decreases the renal tubular capacity for phosphate reabsorption <i>R. K. Zalups and F. G. Knox</i>	F345
Hydrogen ion secretion by the rat distal nephron: adaptation to chronic alkali and acid ingestion <i>C. Kornandakiet, R. Grekin, and R. L. Tannen</i>	F349
Intracellular Cl ⁻ activity of the proximal tubule of <i>Triturus</i> kidney: dependence on extracellular ionic composition and transmembrane potential <i>K. Yoshitomi and T. Hoshi</i>	F359
Transport of phosphate, D-glucose, and L-valine in newborn rat kidney brush border <i>M. Lelievre-Pegorier, T. Jean, P. Ripoche, and P. Poujeol</i>	F367
Sodium-dependent succinate transport in renal outer cortical brush border membrane vesicles <i>Y. Fukuhara and R. J. Turner</i>	F374
Development of solute transport in rabbit proximal tubule. I. HCO ₃ ⁻ and glucose absorption <i>G. J. Schwartz and A. P. Evan</i>	F382
Development of solute transport in rabbit proximal tubule. II. Morphologic segmentation <i>A. P. Evan, V. H. Gattone II, and G. J. Schwartz</i>	F391

RAPID COMMUNICATIONS

Intrarenal angiotensin I conversion at normal and reduced renal blood flow in the dog <i>L. Rosivall, D. F. Rinder, J. Champion, M. C. Khosla, L. G. Navar, and S. Oparil</i>	F408
--	------

No. 4. OCTOBER 1983

EDITORIAL REVIEW

Editor's introduction <i>T. E. Andreoli</i>	F417
Chloride-depletion alkalosis with a normal extracellular fluid volume <i>R. G. Luke and J. H. Galla</i>	F419
On the generation, maintenance, and correction of metabolic alkalosis <i>H. R. Jacobson and D. W. Seldin</i>	F425

Suppression of distal urinary acidification after recovery from chronic hypocapnia <i>D. C. Batlle, K. Itsarayoungyuen, M. Downer, R. Foley, J. A. L. Arruda, and N. A. Kurtzman</i>	F433
Function of proximal tubule carbonic anhydrase defined by selective inhibition <i>M. S. Lucci, J. P. Tinker, I. M. Weiner, and T. D. DuBose, Jr.</i>	F443
Metabolic alkalosis in models of primary and secondary hyperparathyroid states <i>H. N. Hulter, R. D. Toto, L. P. Ilnicki, B. Halloran, and A. Sebastian</i>	F450
Absence of Cl ⁻ -OH ⁻ or Cl ⁻ -HCO ₃ ⁻ exchange in the rabbit renal proximal tubule <i>G. J. Schwartz</i>	F462
Transepithelial voltage changes during prostatic secretion in the dog <i>E. R. Smith, T. B. Miller, and R. F. Pebler</i>	F470

Flow dependence of proximal tubular bicarbonate absorption <i>R. J. Alpern, M. G. Cogan, and F. C. Rector, Jr.</i>	F478
Determination of glomerular permselectivity to neutral dextrans in the dog <i>C. Whiteside and M. Silverman</i>	F485
Determination of postglomerular permselectivity to neutral dextrans in the dog <i>C. Whiteside and M. Silverman</i>	F496
Effects of calcitonin on the renal concentrating mechanism <i>C. de Rouffignac and J. M. Elalouf</i>	F506
Aldosterone response in the turtle bladder is associated with an increase in ATP <i>N. Cortas, E. Abras, and M. Walser</i>	F512
Renal tubular calcium transport: effects of changes in filtered calcium load <i>R. A. L. Sutton, N. L. M. Wong, G. A. Quamme, and J. H. Dirks</i>	F515
Renal perfusion in dogs with experimental hepatic cirrhosis: role of prostaglandins <i>M. Levy, M. J. Wexler, and C. Fechner</i>	F521

RAPID COMMUNICATIONS

Enhanced recovery of renal ATP with postischemic infusion of ATP-MgCl ₂ determined by ³¹ P-NMR <i>N. J. Siegel, M. J. Avison, H. F. Reilly, J. R. Alger, and R. G. Shulman</i>	F530
---	------

No. 5. NOVEMBER 1983

EDITORIAL REVIEW

Application of the disequilibrium pH method to investigate the mechanism of urinary acidification <i>T. D. DuBose, Jr.</i>	F535
---	------

Effector loci for renal nerve control of cortical microcirculation <i>V. Kon and I. Ichikawa</i>	F545
Perturbation analysis of tubuloglomerular feedback in hydropenic and hemorrhaged rats <i>L. C. Moore and J. Mason</i>	F554
Chloride dependence of the HCO ₃ exit step in urinary acidification by the turtle bladder <i>J. L. Fischer, R. F. Husted, and P. R. Steinmetz</i>	F564
Effect of acute potassium load on reabsorption in Henle's loop in the rat <i>C. R. Sufit and R. L. Jamison</i>	F569
Evidence for PAH extraction from superficial cortical efferent vessel plasma <i>S. W. Weinstein, R. Klose, and A. M. Kumar</i>	F577
Luminal buffer transport in rat cortical tubule: relationship to potassium metabolism <i>B. Karlmark, P. Jaeger, and G. Giebisch</i>	F584
Ammonium transport in rat cortical tubule: relationship to potassium metabolism <i>P. Jaeger, B. Karlmark, and G. Giebisch</i>	F593
Influence of acute potassium loading on renal phosphate transport in the rat kidney <i>P. Jaeger, J.-P. Bonjour, B. Karlmark, B. Stanton, R. G. Kirk, T. Duplinsky, and G. Giebisch</i>	F601
Aldosterone binding in isolated tubules. III. Autoradiography along the rat nephron <i>N. Farman and J. P. Bonvalet</i>	F606
Contribution of vasopressin to the maintenance of blood pressure during dehydration <i>R. L. Woods and C. I. Johnston</i>	F615
Passive driving forces of proximal tubular fluid and bicarbonate transport: gradient dependence of H ⁺ secretion <i>Y. L. Chan, G. Malnic, and G. Giebisch</i>	F622

RAPID COMMUNICATIONS

- Urea transport in isolated thick ascending limbs and collecting ducts from rats
M. A. Knepper F634
- Intracellular chloride activities in the isolated perfused shark rectal gland
M. J. Welsh, P. L. Smith, and R. A. Frizzell F640

No. 6. DECEMBER 1983

EDITORIAL

- Journals in the eighties F645

EDITORIAL REVIEW

- Mechanisms of active H^+ secretion in the proximal tubule
P. S. Aronson F647
-
- Mode of inhibition of active chloride transport in the frog cornea by furosemide
R. Patarca, O. A. Candia, and P. S. Reinach F660
- Cellular response to acute respiratory acidosis in rat medullary collecting duct
K. M. Madsen and C. C. Tisher F670
- Handling of ammonium by the renal proximal tubule during acute metabolic acidosis
E. Simon, D. Martin, and J. Buerkert F680
- Canine renal vascular response to hyperoncotic dextran in kidneys with or without glomerular filtration
R. W. Gotshall F687
- Bioenergetics of Na^+ transport across frog skin: chemical and electrical measurements
M. M. Civan, K. Peterson-Yantorno, D. R. DiBona, D. F. Wilson, and M. Erecińska F691
- P_i transport, phosphorylation, and dephosphorylation in renal membranes from HYP/Y mice
M. R. Hammerman and L. R. Chase F701
- Role of carboxyl group in Na^+ -entry step at apical membrane of toad urinary bladder
C. S. Park, J. Kipnowski, and D. D. Fanestil F707
- Functional groups of the Na^+ channel: role of carboxyl and histidyl groups
C. S. Park and D. D. Fanestil F716
- Modification of carboxyl of Na^+ channel inhibits aldosterone action on Na^+ transport
J. Kipnowski, C. S. Park, and D. D. Fanestil F726
- Effects of verapamil in models of ischemic acute renal failure in the rat
C. D. Malis, J. Y. Cheung, A. Leaf, and J. V. Bonventre F735
- Flow-dependent water permeability of the rabbit descending limb of Henle's loop
T. Miwa and M. Imai F743
- Afferent arteriolar diameter in DOCA-salt and two-kidney one-clip hypertensive rats
B. M. Iversen, L. Mørkrid, and J. Ofstad F755
- CNS-induced natriuresis and renal hemodynamics in conscious rats
D. Beasley, R. L. Malvin, and D. R. Mouw F763
- Inhibition of vasopressin action by vanadate in the cortical collecting tubule
R. M. Edwards and J. J. Grantham F772
- Furosemide-sensitive thallium fluxes in smooth muscle of rabbit uterus
A. Johns and S. V. Cutshaw F778

Effects of variations in renal hemodynamics on the time course of renin secretion rate <i>S. Simchon and S. Chien</i>	F784
Response of ³¹ P-nuclear magnetic resonance spectra of frog skin to variations in PCO ₂ and hypoxia <i>R. L. Nunnally, J. S. Stoddard, S. I. Helman, and J. P. Kokko</i>	F792
Localization of tissue potassium pools in the amphibian kidney <i>H. L. Wilkinson, L. P. Sullivan, D. J. Welling, and L. W. Welling</i>	F801
<hr/>	
ANNOUNCEMENTS	F813
<hr/>	
<i>Subject Index to Volume 14</i>	F815
<i>Author Index to Volume 14</i>	F823

CORRIGENDA

Volume 244, May 1982

Volume 13, May 1982

Contents: the correct title for the article on page F504 by S.-M. K. Lee, M. A. Chekal, and A. I. Katz is "Corticosterone binding sites along the rat nephron."

